

TSITSA BRIDGE 45189763 100F#SPAN

BRAITHWAITE & KIRK MAKERS WESTBROMMUCH

TOUW RIVER BRIDGE - 1897 -100 F. SPAN

G.I.P.RY CONTRACT Nº 260

1.S.R & KIRK

CROWN AGENTS FOR THE COLON 2 PS TANKS 24.12 12 DEEP WITH SPECIAL COVERS REON W/TANG RLY 3616/1 INDENT Nº RLY 208 DATED 4 10 4 BRAITHWAITE & CO ENGINEER NEWPORT MON ORDER Nº GT8240 SEPT

BRAIT STEEN

CHOTA TOWA BRIDGE 65-8 Span Brathwalles hirt West Brownich

CROWN AGENTS COLONIES PSTANK 24x24x12 DIVISION ON STEEL TOWER 57-9 HIGH REON. W/TANG. RLY. 3245/1 INDENT Nº RLY. 1 - DATED 5-1-44 CONTRACTORS BRAITHWAITE & COENGLO NEWPORT ORDER Nº T-7731 - NOV. 1934

SOUTH BEHAR RAILWAY. GOFT SPAN. Confract Nº 18. BRAITHWAITE & KIRK

I.S.R GOONA BARAR! 40ft SPAN & KIRK

D KAI

Chandmaree Road Brudge. & KIRK. westbromwich. STANDARD DERRICK 36'-0"HIGH FOR THE WAR OFFICE ENGINEER W.T.EVERALL M.INST.C-E CONTRACTORS BRAITHWAITE & Cº. ENGINEERS.LTD WEST BROMWICH CONTRACT Nº 4229 OF 1939.

GENTRAL SOUTH AFRICAN (G RY D) 50 Metre Spans Reqne \ Braithwaite W.901/1) & Kurk 1906 West-Bromwich

BRAITHW STEELVIO

CROWN AGENTS FOR THE COLONIES 1PS TANK 16.12.8 DEEP WITH REON W/CEYLON RLY 6500/1 INDENT Nº 1026 DATED 2 2 46 BRAITHWAITE & CO ENGINEERS LTD CONTRACTORS SEPT 1941 NEWPORT MON ORDER Nº GT8372

ICA GOVERNMENT RAILWAY 778/1 (JUNE 16 1923) MAKERS NAITE&C[©]ENGINEERSL™ TORIA SI LONDON SWL

AITHWAITE&C° ENGE L'ID WEST BROMWICH HP.CYLINDER SCREWING CAPSTAN - Nº3 -

FOOTBRIDGES AHMEDABAD B.B&C.I.RLY 1/50 & 1/70 SPAN WEST BROMWICH.

CROWN AGENTS FOR THE COLONIES IPS TANK 24x20x4DEEP, WITH CENTRAL DIVISION REQN W/CEYLON RLY 6601/1 INDENT Nº 1091/46 DATED 1-5-46 CONTRACTORS -BRAITHWAITE & Cº ENGINEERS LTD ORDER Nº T8594 JULY 1947

NATAL GOVI RYS Indent no (Braithwaite R&H.980.A) & Kirk 1906 West Bromwich 1906

AITE RK

75-6 SPAN, CON! BRHITHWAITE & KIRK, 1901. Westbromwich.

MAI

INDIAN STATE RES 100 O DECK SPANS CONI NO D 253 (1904) BRAITHWAITE & KIRK WESTBROMWICH

EAST INDIAN A 150-0 SPANS Cont 119 Branthwaite 1681 Branthwaite 1905 Hest Bromwich

SANTA MARTARY 146.0 & 40.0 SPANS Specificulion NoF914 Brailmaile S-Kirk West-Brommich 1906

.: S.R GAUGE 60-0 CLEAR SPAN

Grant Dudant Penins COMPRES MANAIR

STEELWORK BY BRAITHWAITE & C.O. ENGINEERS LID. INCORPORATED IN GREAT BRITAIN LONDON WEST BROWWICH NEW PORT ROLL.

25-OSPANS MADE FOR Mess'SI. REID& GO BYB/withwaites.Kith 1906 West-Bromwich

ITE

K

UGANDARAILWAY CYLINDERS & BEARING GIRDERS FOR BRIDGE PIERS REO Nº 604-1899 SIR A. M. RENDEL Engineer

STEELWORK BRAITHWAITE ENCINEERS LTD WEST BROWWICH

> STEELWORK BRAITHWAITE & C ENGINEERS LID WEST BROMWICH

CROWN AGENTS FOR THE COLONIES P.S. TANK 16 x 16 x 8 DEEP, OPEN TOP PREPARED FOR INCREASE TO 12' DEEP ON 30' HIGH STEEL TOWER REQ. NO.W/KUR 3233/IA INDENT NO.939 DATED 20. 6. 46. CONTRACTORS -BRAITHWAITE & CO STRUCTURAL LTD NEWPORT, MON JUNE 1949 ORDER NO T502

CAPEGOVERNMENT RYPW.D. 1910 Wext Bromwich

NATAL GOVERNMENT RES 400 SPAN Indent Nº LaW 208

BRAITHWAITE X-KIRK MAKERS

906 BRAITHWAITE & Ca Encora Line.

WEST BROMWIC THE MANILA RY COLO PENERANDA BRIDGE 50 metre Braithwaite Kirk West-Bromwich

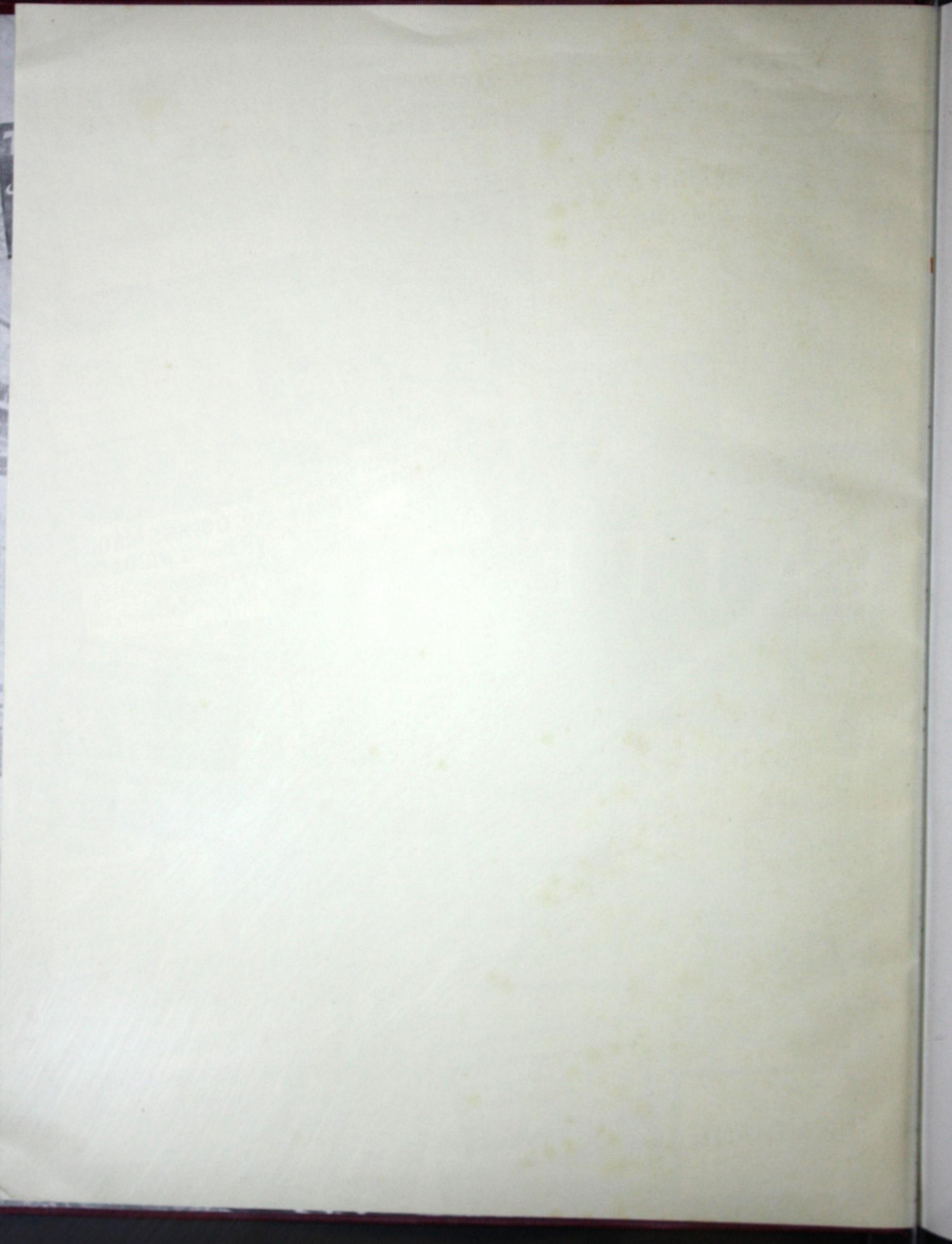
#CROWN AGENTS™COLON REQ! Nº W/RAQ. 4163/1.

BRIDGES IRAQ

BRAITHWAITE & C' ENG! L! WEST BROMWICH

NOV. 107 1934.

CROWN AGENTS FOR THE COLONIES TANK 40x 36 x 12 DEEP WITH WEATHERPROOF COVER
ON STEEL TOWER 20 HIGH
REG NO W/EC3 UGANDA PWD 2786/1 NOENT NO 64/1949 DATED 13 149 BRAITHWAITE & CO STRUCTURAL LTD NEWPORT MON ORDER NO T805 DATE MAY 1950



BRAITHWAITE & Co.

ENGINEERS LIMITED.



Telephone: Whitehall 3993 Telegrams: Bromkirk, Phone, London

DORLAND HOUSE REGENT STREET LONDON S.W.I

REGISTERED OFFICE: THE MOORINGS, GREAT BOOKHAM, SURREY





BRAITHWAITE & Co.

ENGINEERS LIMITED.

SUBSIDIARY COMPANIES AND OVERSEAS BRANCHES

BRAITHWAITE & CO. STRUCTURAL LIMITED

CROWN BRIDGE WORKS, WEST BROMWICH, STAFFS.
NEPTUNE WORKS, NEWPORT, MON.

BRAITHWAITE & CO. OVERSEAS LIMITED

DORLAND HOUSE, REGENT STREET, LONDON, S.W.I

BRAITHWAITE & CO. (INDIA) LIMITED

CLIVE WORKS, HIDE ROAD, KIDDERPORE, CALCUTTA

BRAITHWAITE & CO. EGYPT LIMITED

2 SHARIA ELHAMI, KASR EL DOUBARA, CAIRO

BRAITHWAITE & CO. ENGINEERS LIMITED

YENİ HAN, YENİÇERİ AĞASI SOK., İSTİKLÂL CAD., İSTANBUL, TURKEY.

ASSOCIATED COMPANY

BRAITHWAITE, BURN & JESSOP CONSTRUCTION CO. LTD.
P. 13. MISSION ROW EXTENSION, CALCUTTA

DORLAND HOUSE, REGENT STREET

LONDON, S.W.I





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BRIDGES

PIERS, WHARVES AND JETTIES

SCREWCRETE FOUNDATIONS

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POWER STATIONS

STEEL FRAMED STRUCTURES

STEEL TOWERS AND PYLONS

WELDED STRUCTURES

RAILWAY WAGONS

PRESSED STEEL TANKS

WORLD WAR II, 1939-1945





Braithwaite & Co. Engineers Limited

Dorland House, Regent Street, London, S.W.I

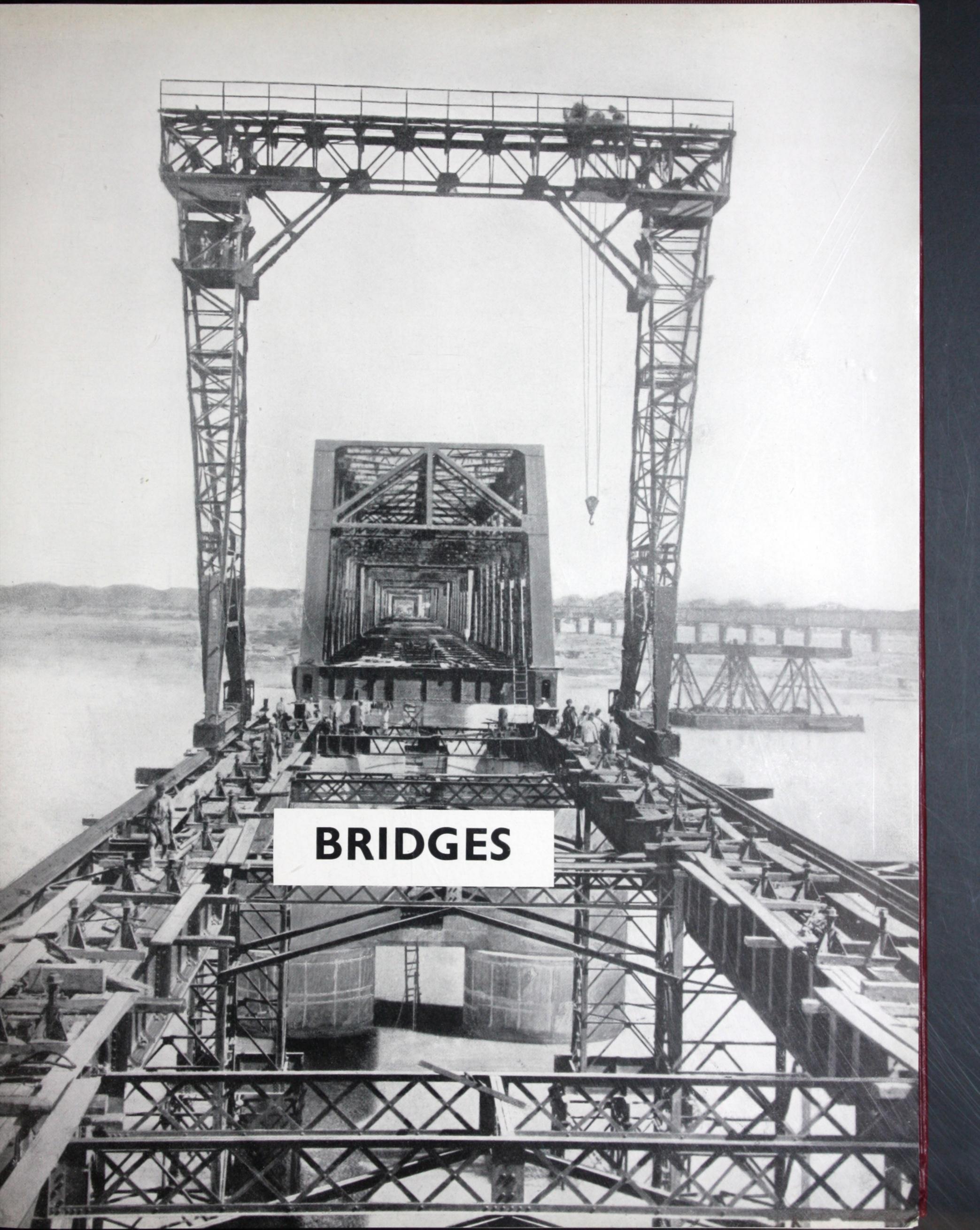
The firm of Braithwaite & Co. Engineers Limited, founded in 1884 under the name of Braithwaite and Kirk at Crown Bridge Works, West Bromwich, England, was engaged exclusively for a number of years on the manufacture of Bridgework, the majority of which was for export to British Possessions abroad. In 1915 a further works was established at Newport, England. In 1921 the name of the Company was changed from Braithwaite and Kirk to Braithwaite & Co. Engineers Limited. By degrees the Company's activities extended into the wider commercial field of heavy Structural Steelwork, Wharves and Harbour Works, Pipe Lines, General Steel Construction, specialised methods of Piling and Civil Engineering and Contracting.

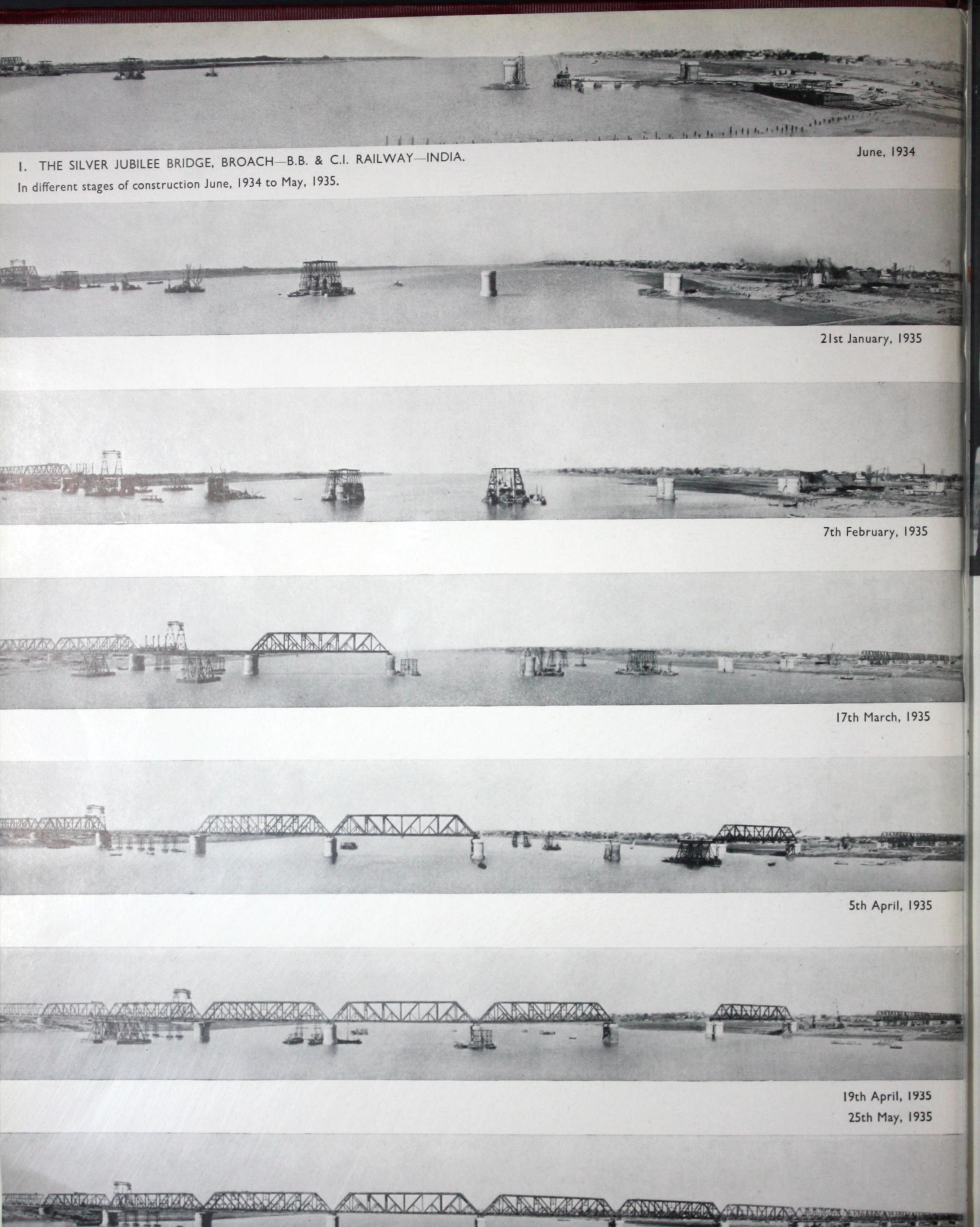
Interest in operations overseas began in 1913 when a branch was opened in Calcutta. In 1921 a further branch was opened in Bombay. In subsequent years branches were opened in Turkey and Egypt. The activities of the Company overseas have included the supply of something like 60 per cent of the Steel Bridgework constructed in India in recent years; the construction of Wharves and Jetties in Calcutta, Beira, Rangoon, Iskenderun, Cochin and the Bosphorus; Pipe Lines in Bombay, Sao Paulo, Rangoon and Cairo, and miscellaneous Civil Engineering Works in Turkey, Egypt, Syria and Saudi Arabia.

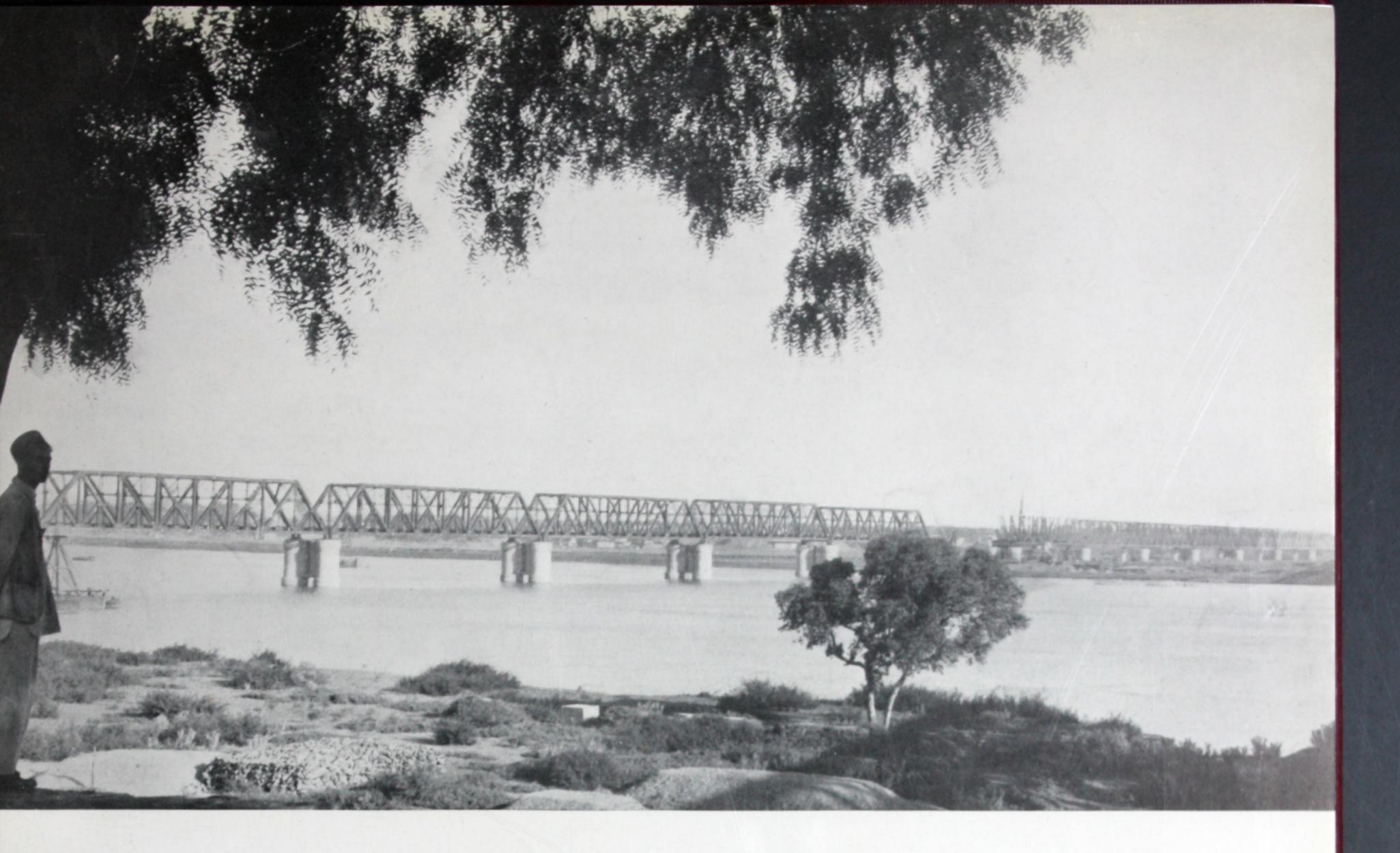
In 1948 it was decided to reconstruct the organisation in a manner best suited to meet increasing trade and to-day Braithwaite & Co. Engineers Limited controls a world-wide organisation which is engaged on General Civil Engineering Work, the fabrication and erection of Steel Bridgework and Structural Steelwork of all types.



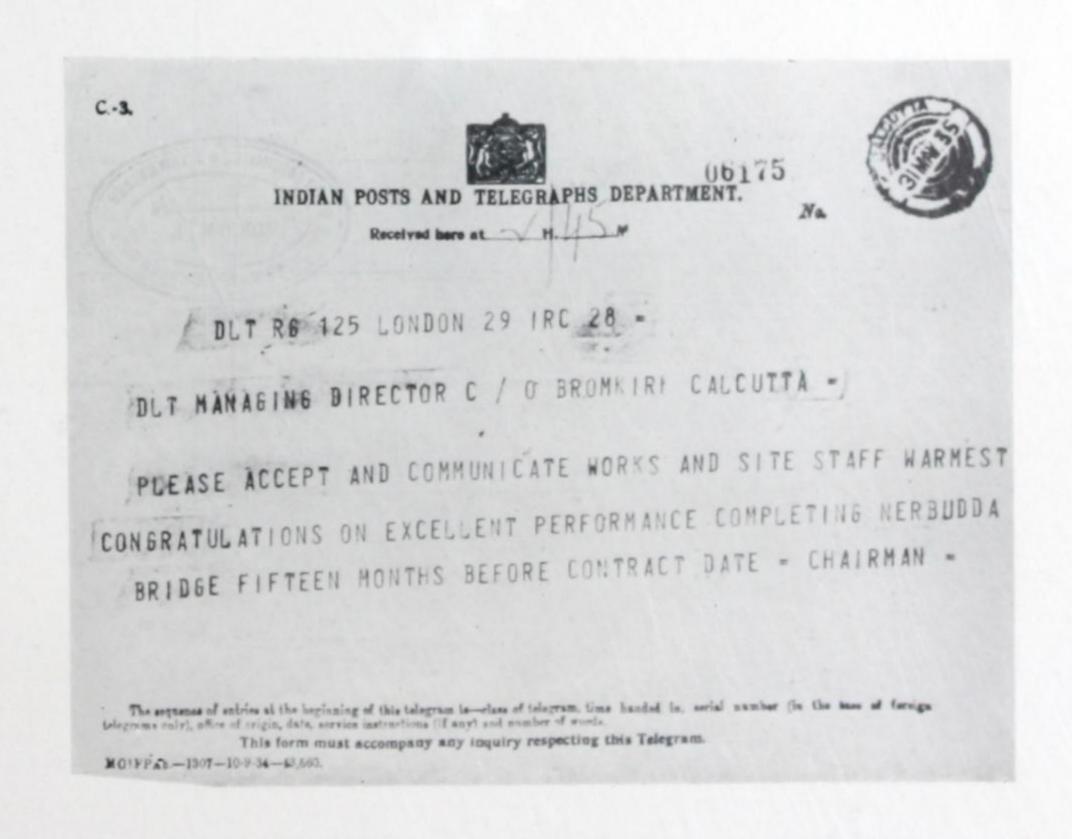








2. THE SILVER JUBILEE BRIDGE, BROACH—B.B. & C.I. RAILWAY—INDIA Across the Nerbudda River.



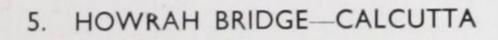


3. HOWRAH BRIDGE-CALCUTTA, INDIA

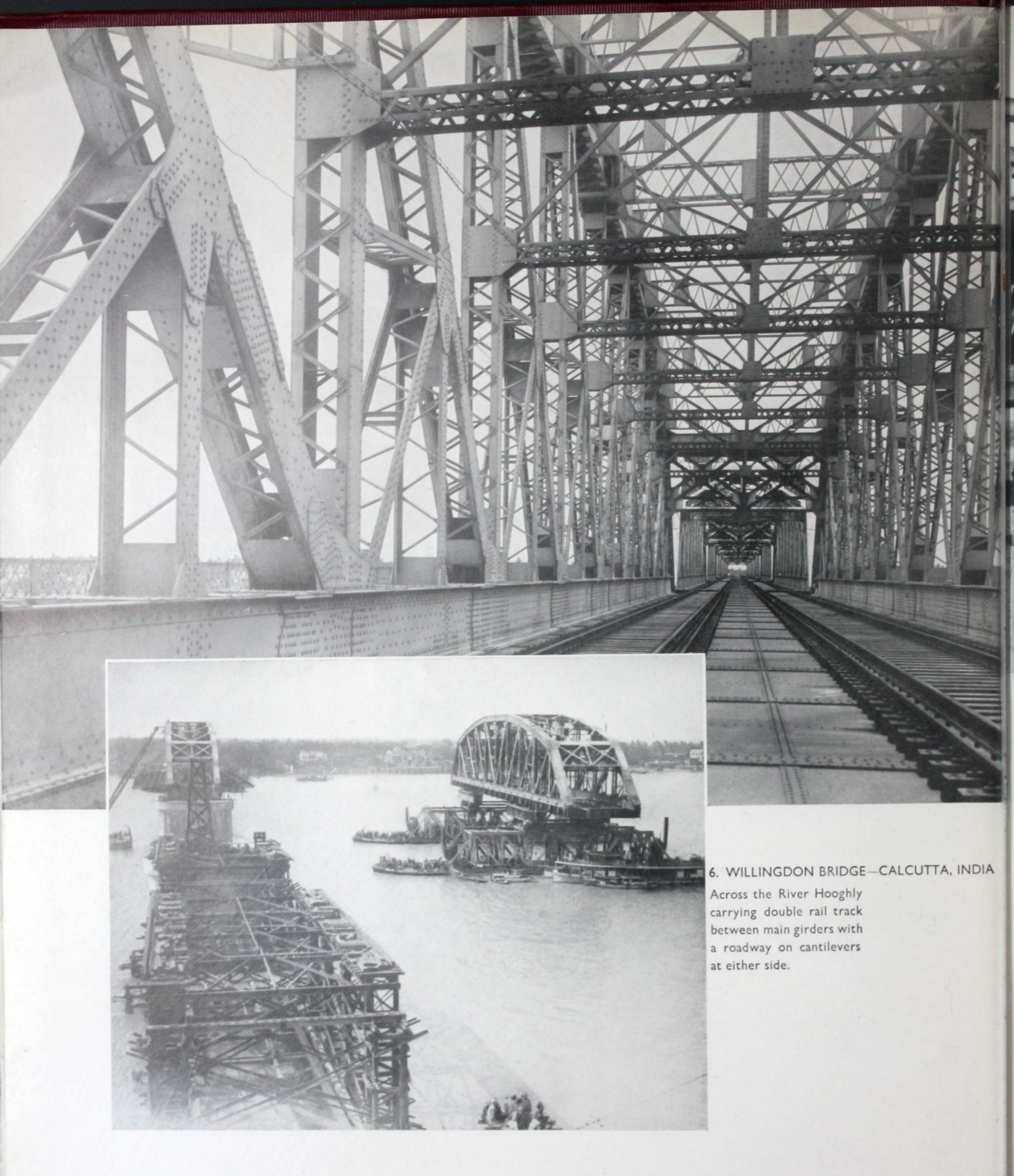
Howrah Bridge spanning the River Hooghly at Calcutta. The steelwork was made in the several Works of The Braithwaite, Burn & Jessop Construction Co. Ltd., Calcutta.



4. HOWRAH BRIDGE—CALCUTTA







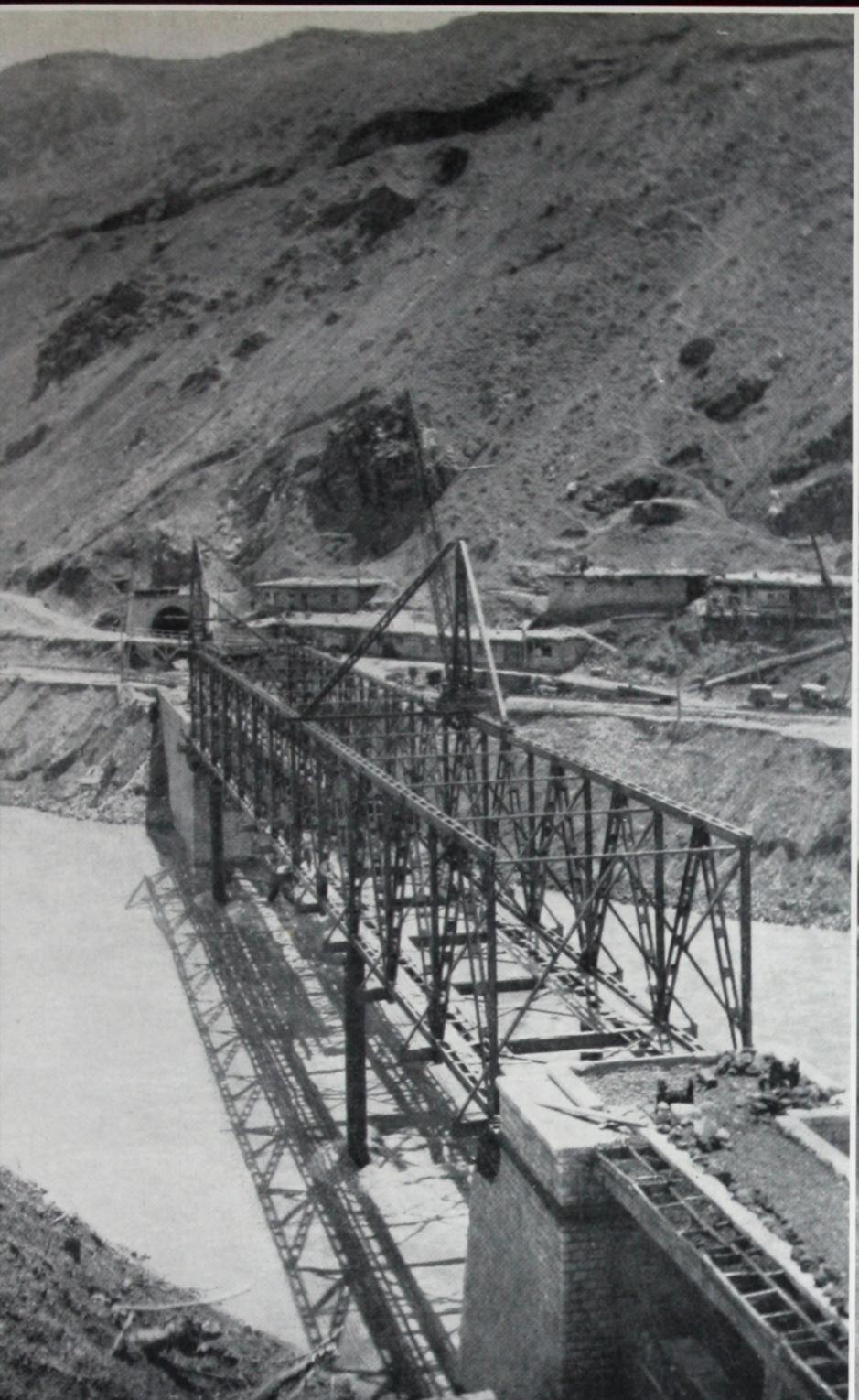


7. THE JUMNA BRIDGE—INDIA

Carries the North Western Railway on the upper floor system and a roadway on the lower system. It consists of 12 spans of 214 feet each and two approach spans with a total length of 2,700. feet.



The spans are supported on 42 inches diameter Screwcrete cylinders with 8 feet diameter helices.

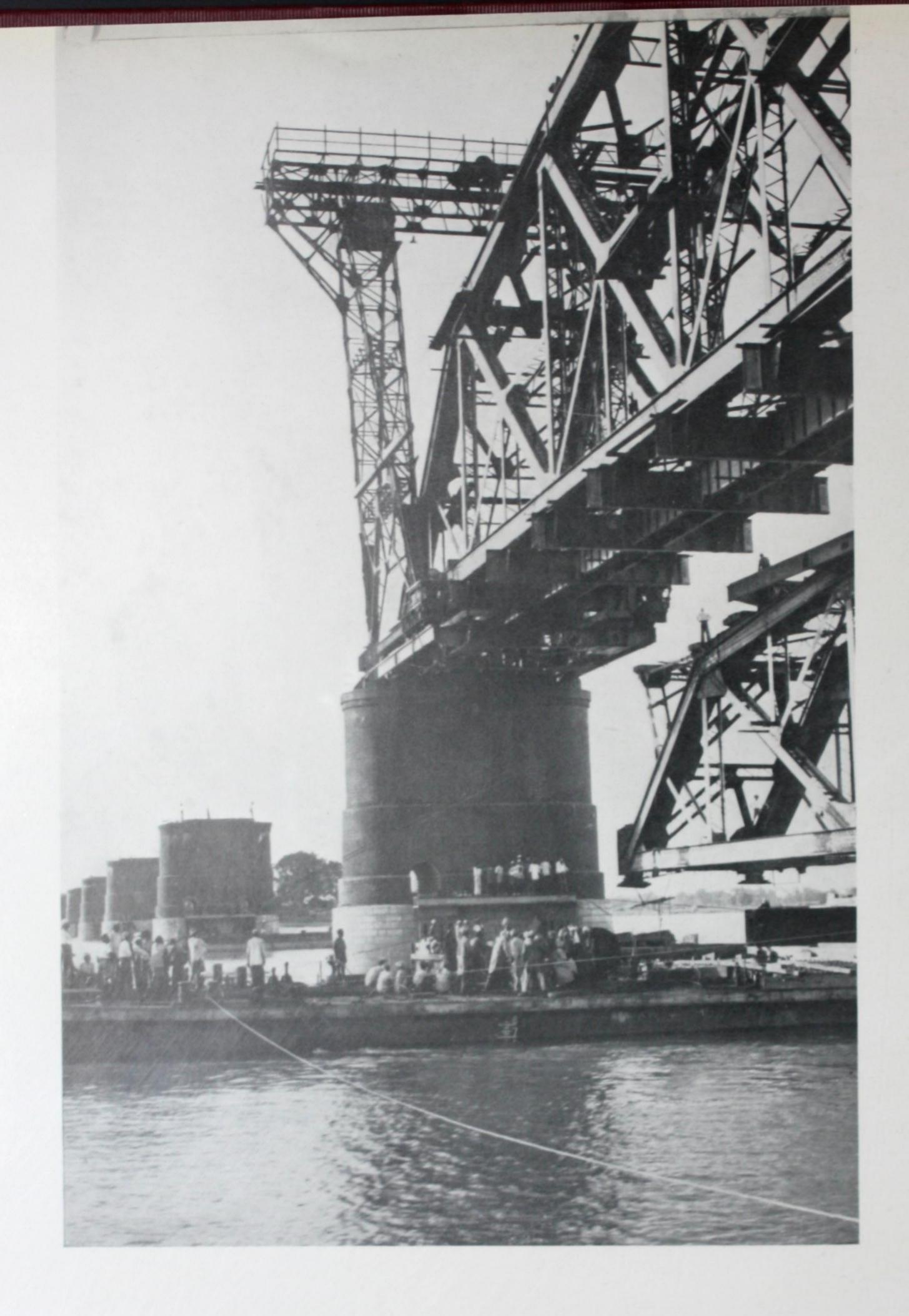




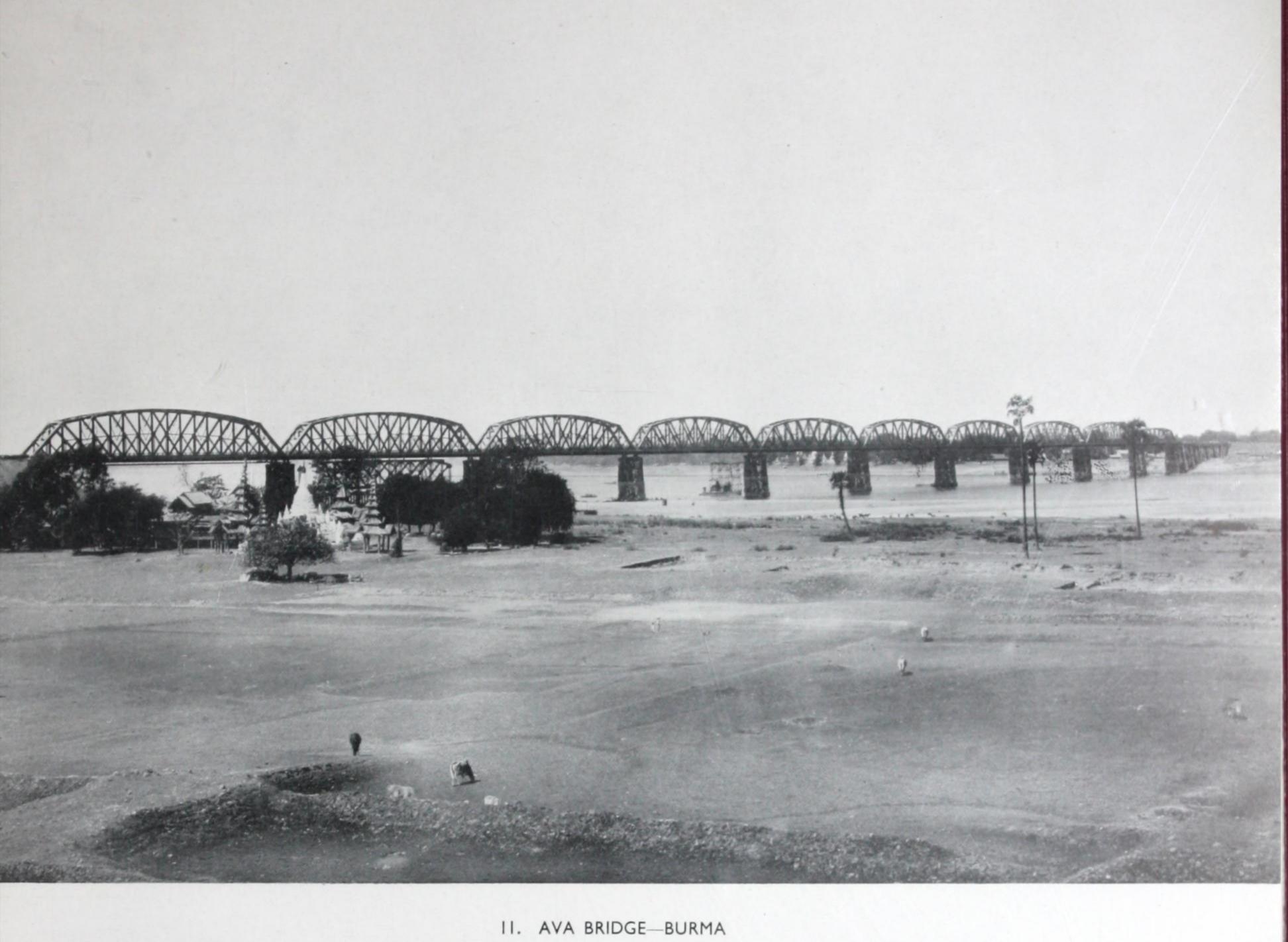
9. RAILWAY BRIDGE—TURKEY

Service Girder during erection

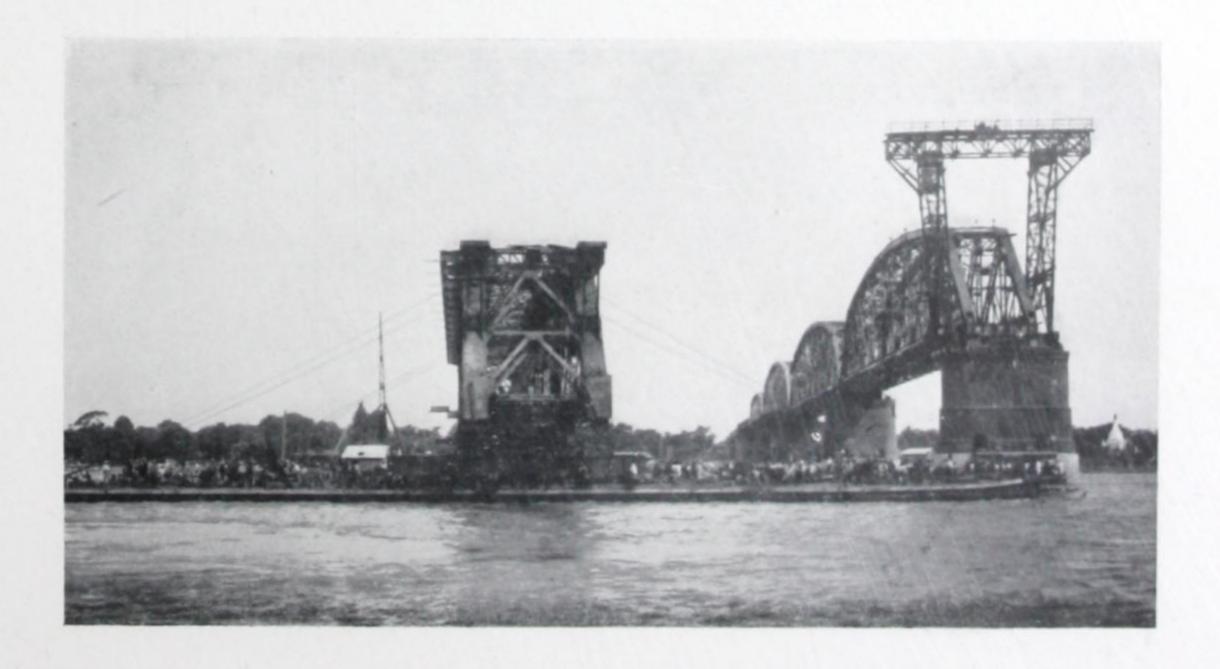
Main Span during erection



10. AVA BRIDGE—BURMA
Floating out the service girder during erection.



II. AVA BRIDGE—BURMA
Spanning the Irrawaddy River.



12. AVA BRIDGE—during construction.

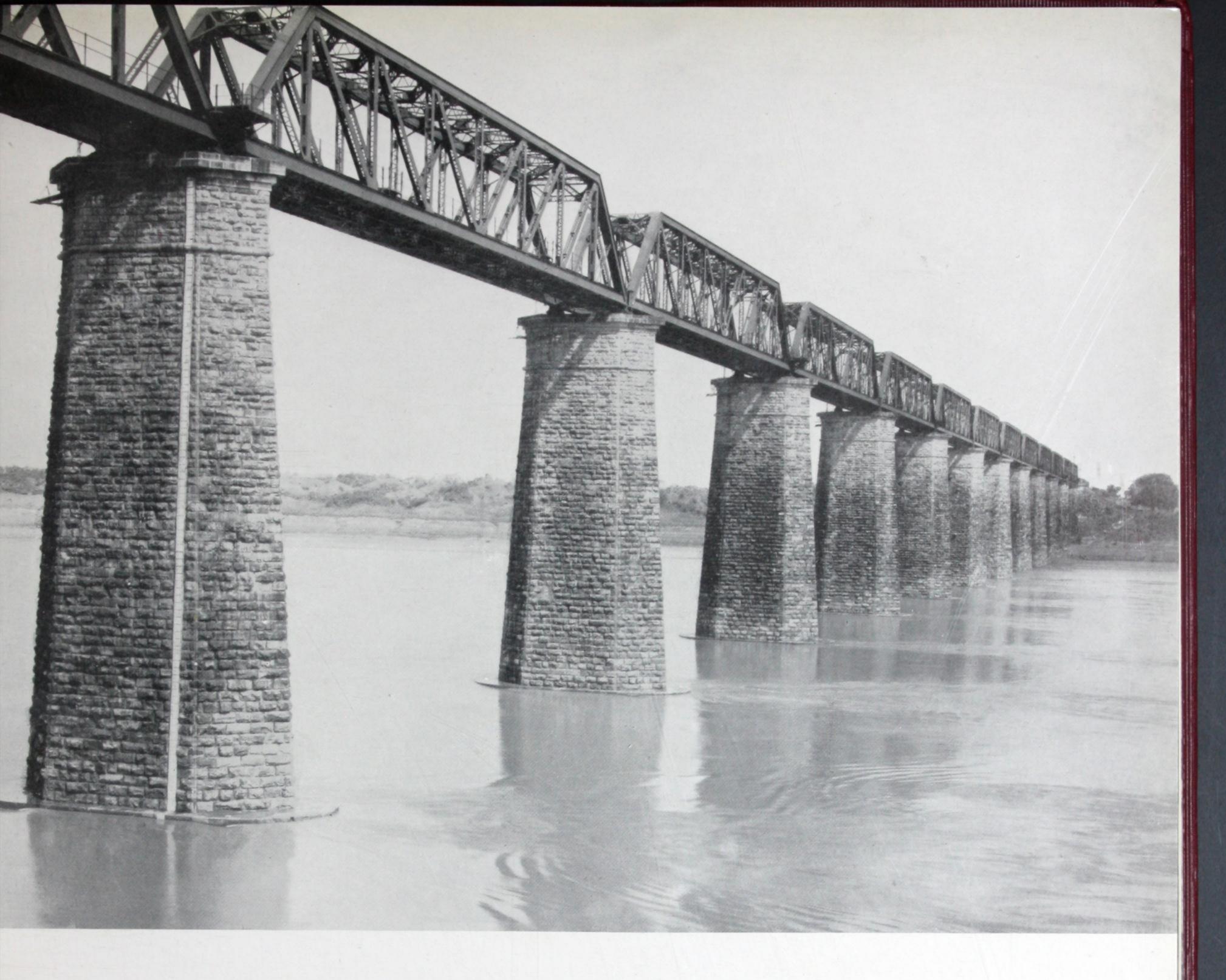


13. KANGRA VALLEY BRIDGE—INDIA Spanning the Roand Nullah in the Himalayas.





17. Dismantling the old suspension bridge after erection of the new spans



18. CHAMBAL BRIDGE-INDIA



19. CHAMBAL BRIDGE—Another view



20. NORTH BRIDGE—BAGHDAD, IRAQ. Across the River Tigris.

Main Contractors: Messrs. Holloway Bros. Ltd.



21. KING FEISAL BRIDGE—BAGHDAD, IRAQ. Across the River Tigris.

Main Contractors: Messrs. Holloway Bros. Ltd.



22. MUSAYIB BRIDGE—IRAQ

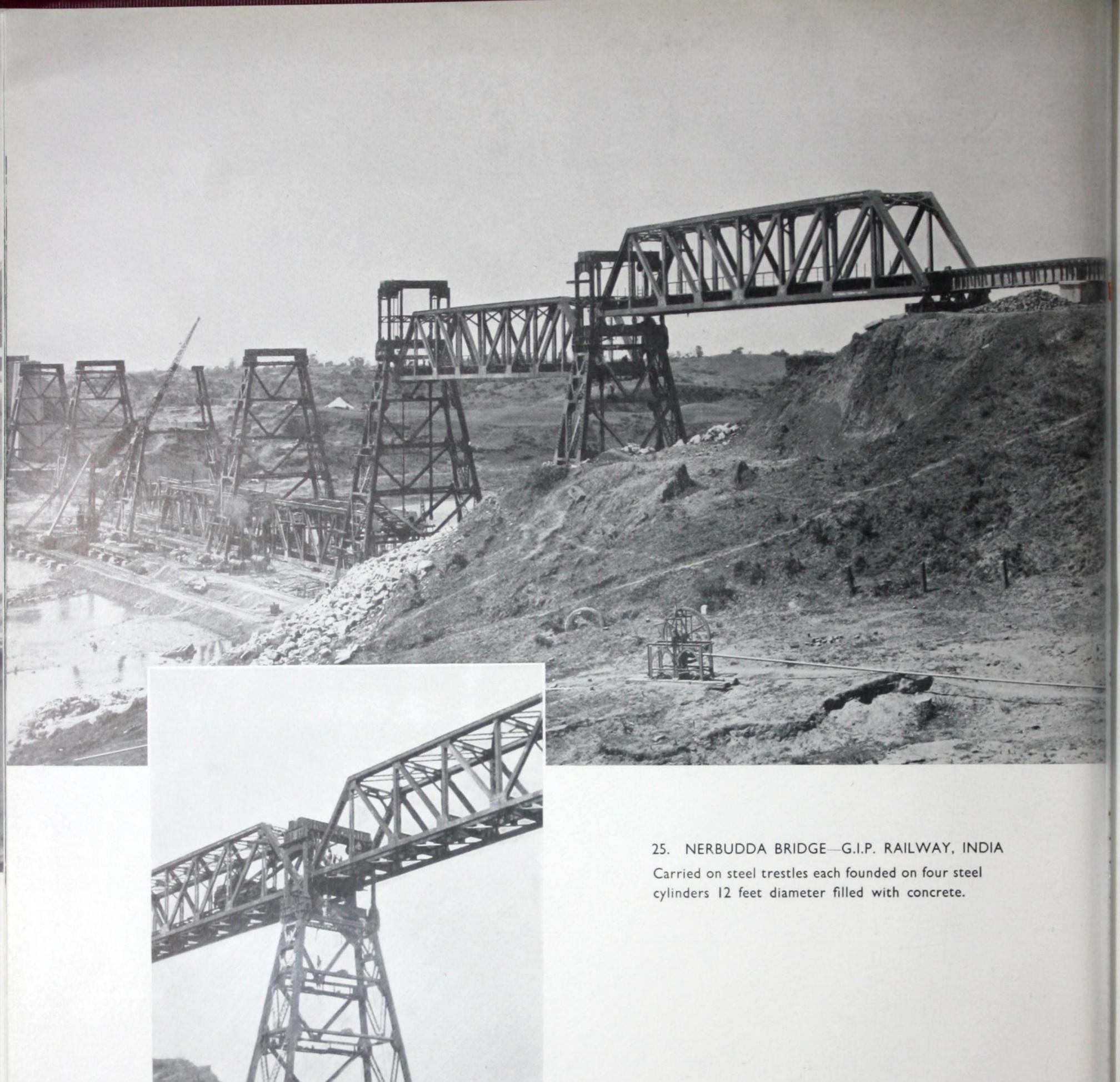


23. ROAD BRIDGE—SOUTH INDIA



24. VILA FRANCA BRIDGE—PORTUGAL

One of the spans supplied by BRAITHWAITES to the main contractors, Messrs. Dorman Long & Co., Ltd.



26. One of the trestles Nerbudda bridge.



27. SWING BRIDGE—EGYPT
Across the Suez Canal at El Ferdan.



28. DAUGAVA BRIDGE—LATVIA

Combined road and rail bridge across the River Daugava at Krustpils, Latvia.



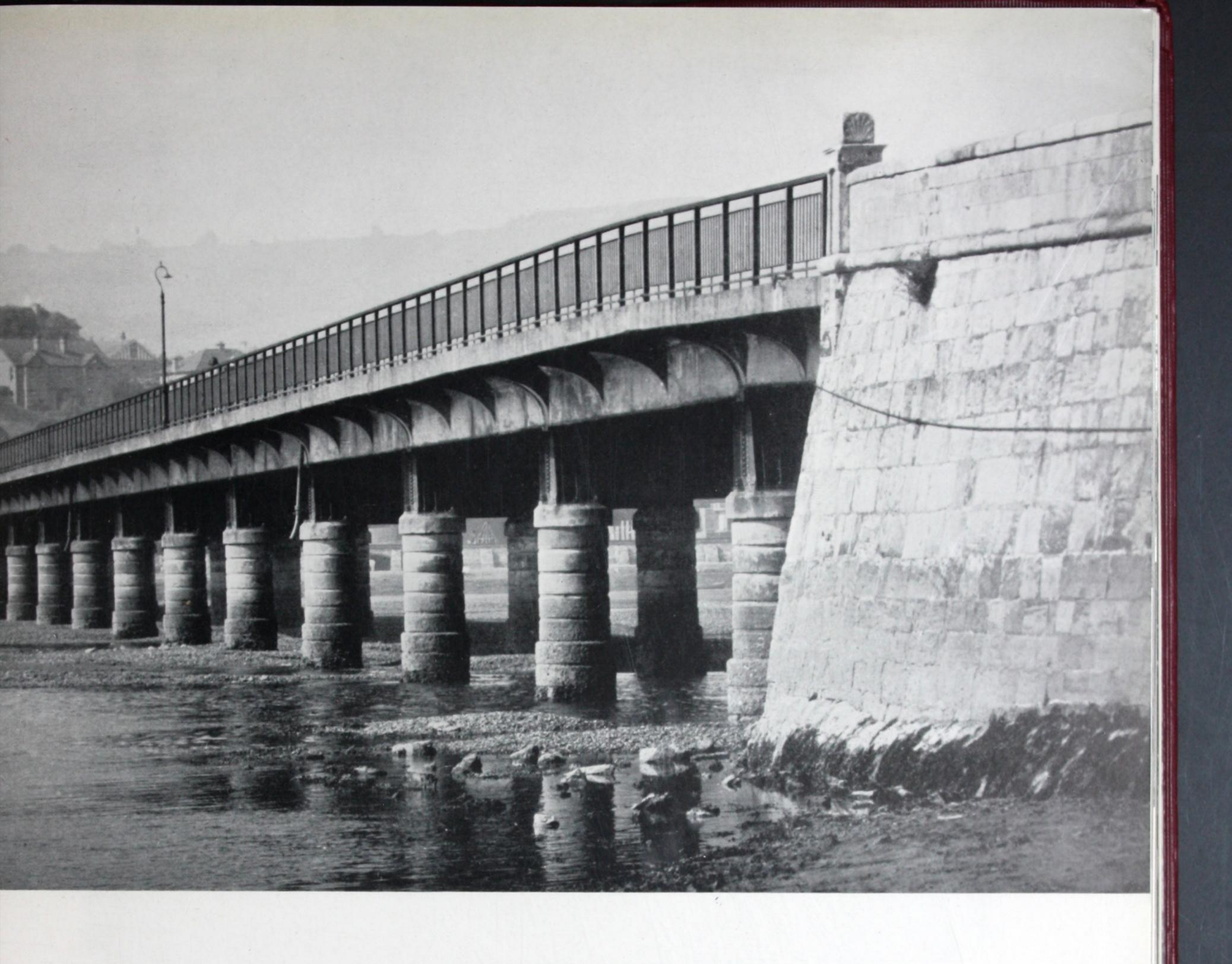
29. NOTTINGHAM VIADUCT-ENGLAND



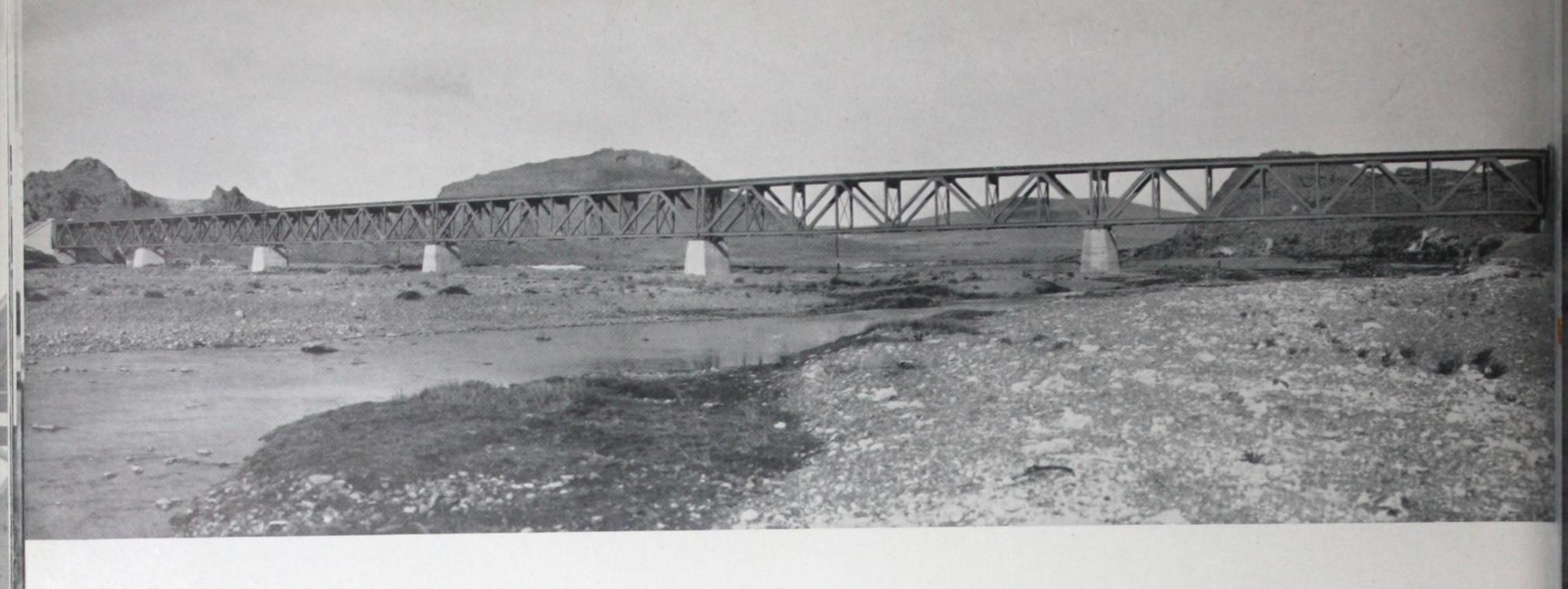
30. RAILWAY BRIDGE L.M.S. RAILWAY, ENGLAND
At Peterborough across the River Nene.



31. RAILWAY BRIDGE—SOUTHERN RAILWAY, ENGLAND Skew span bridge carrying one main line over another.



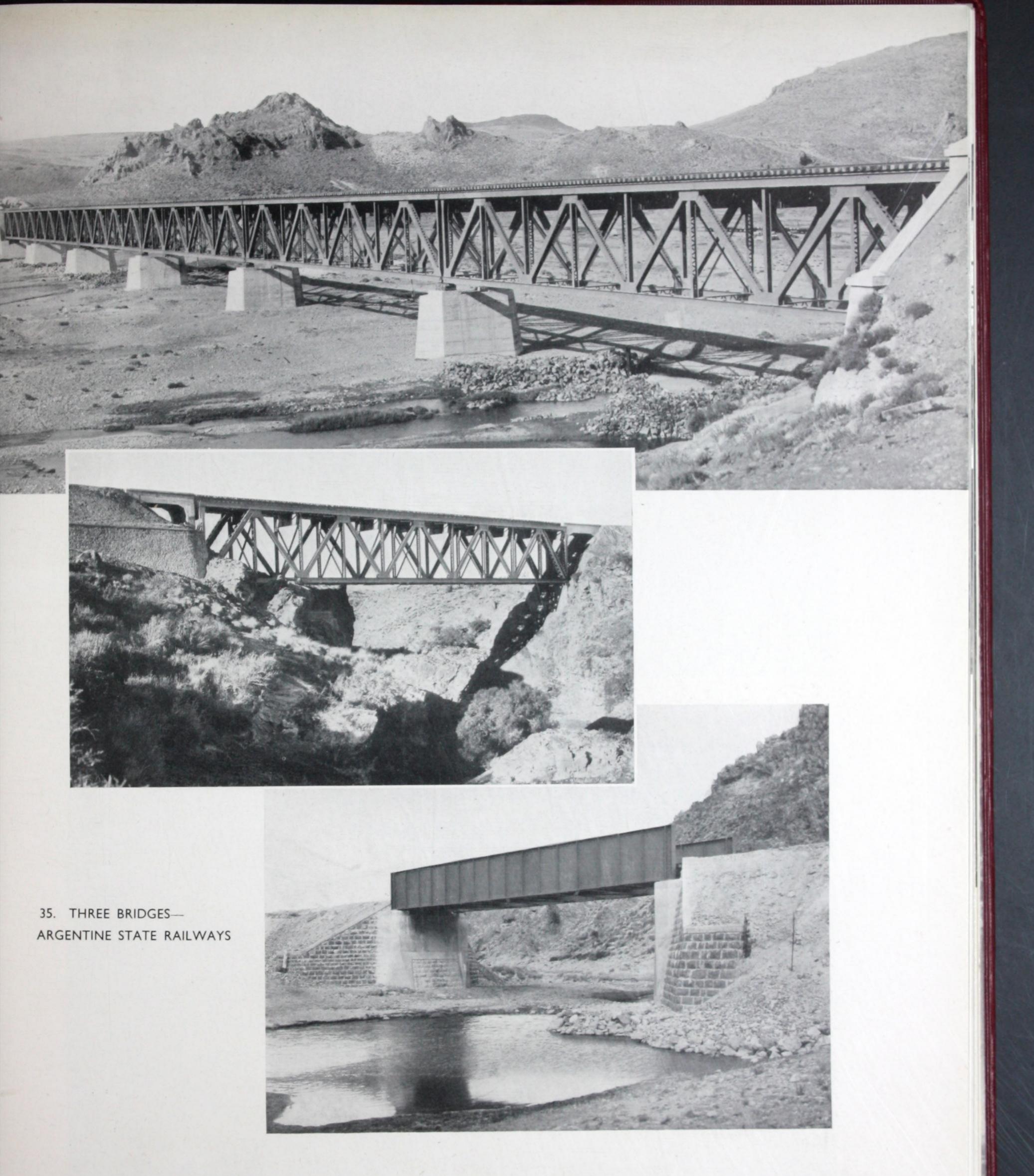
32. TEIGNMOUTH ROAD BRIDGE—DEVON, ENGLAND Across the River Teign.

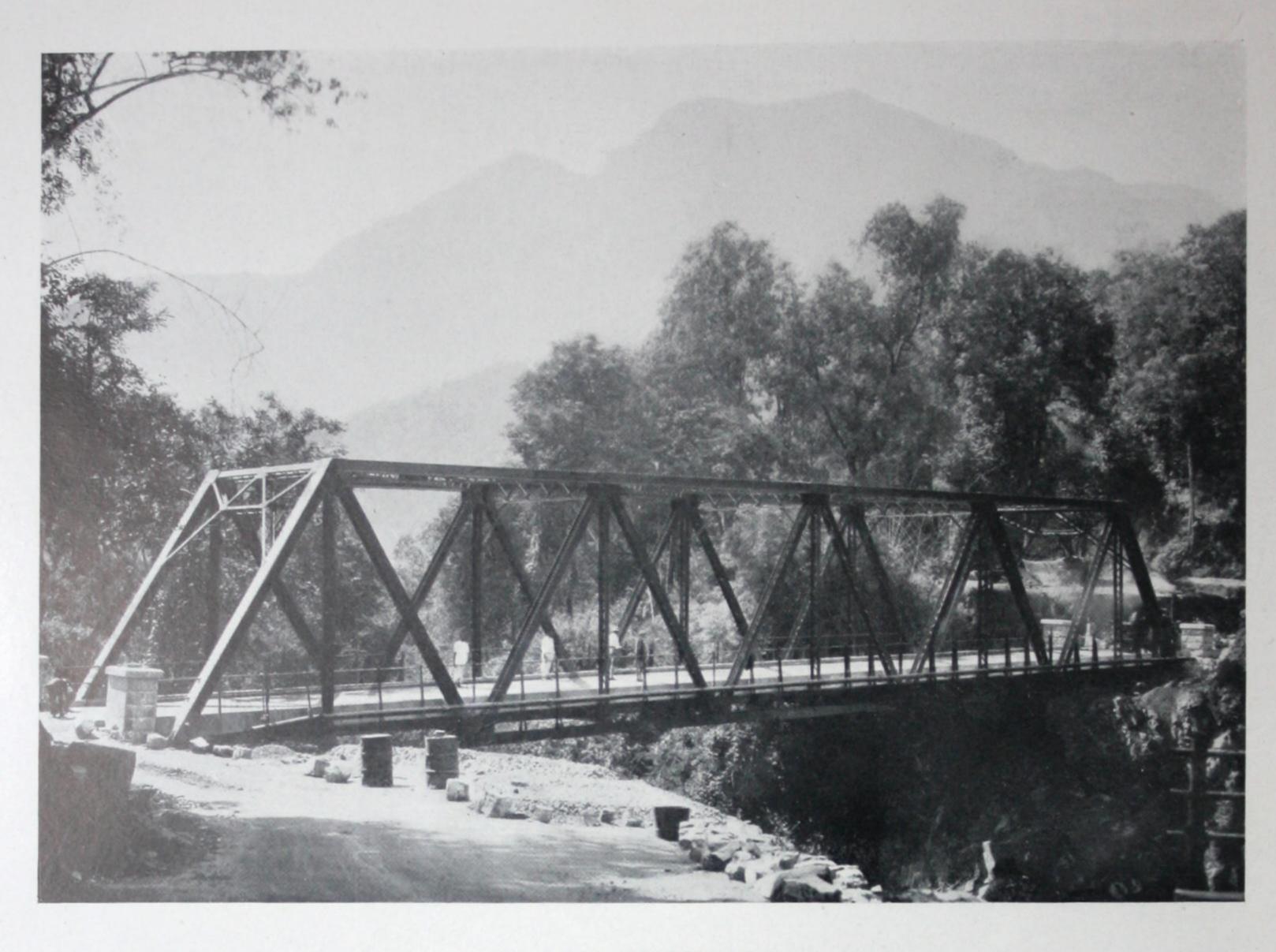


33. BRIDGE—ARGENTINE STATE RAILWAYS
A single line railway bridge over the River Pichileufu.



34. BRIDGE—ARGENTINE STATE RAILWAYS



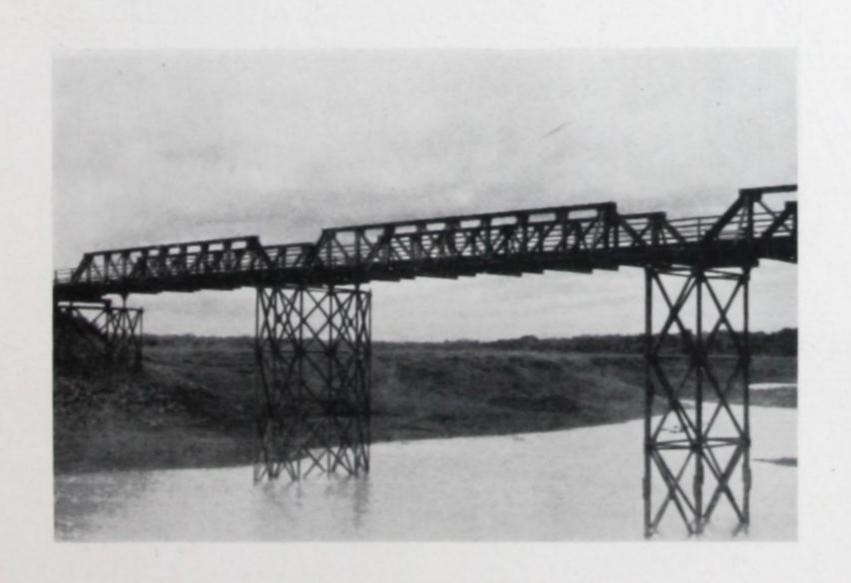


36. ROAD BRIDGES-INDIA





37. ROAD BRIDGES-INDIA







38. BRIDGE-WAZIRISTAN

Military road bridge, carried on solid steel screw piles. One of many supplied to the Military authorities on the Indian Frontier.





39. AHMEDWAN BRIDGE—PAKISTAN

40. JANDOLA BRIDGE—PAKISTAN

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PIERS WHARVES AND JETTIES



41. PIER—BRIGHTON, SUSSEX, ENGLAND

Carried on cast iron piles 12 inches diameter with cast iron helices 30 inches diameter.



42. PIER—COLWYN BAY, NORTH WALES

Carried on cast iron piles 12 inches diameter with
cast iron helices 30 inches diameter.





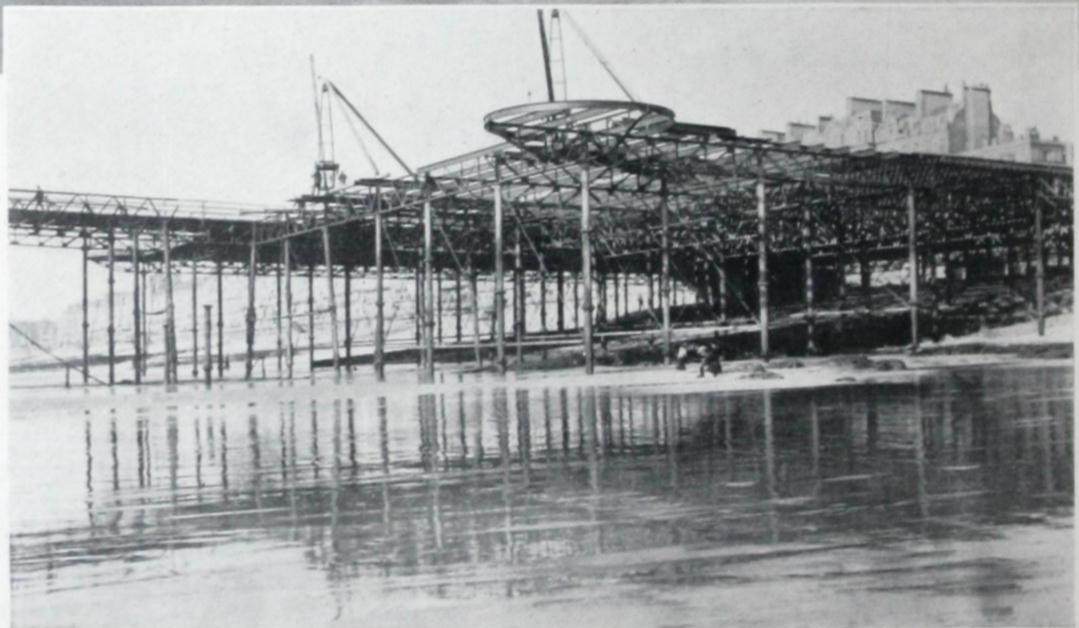
43. PIER—WESTON-SUPER-MARE, SOMERSET, ENGLAND Welded superstructure.



44. JETTY—KINGSNORTH, MEDWAY, ENGLAND Screw pile jetty 2,380 feet long to serve oil tankers.



45. PIER—HASTINGS, SUSSEX, ENGLAND
Steel framed pavilion.



46. PIER—HASTINGS, SUSSEX, ENGLAND Extension to Promenade.



47. JETTY—BHAVNAGAR, INDIA
Supported on solid steel piles with reinforced concrete deck.



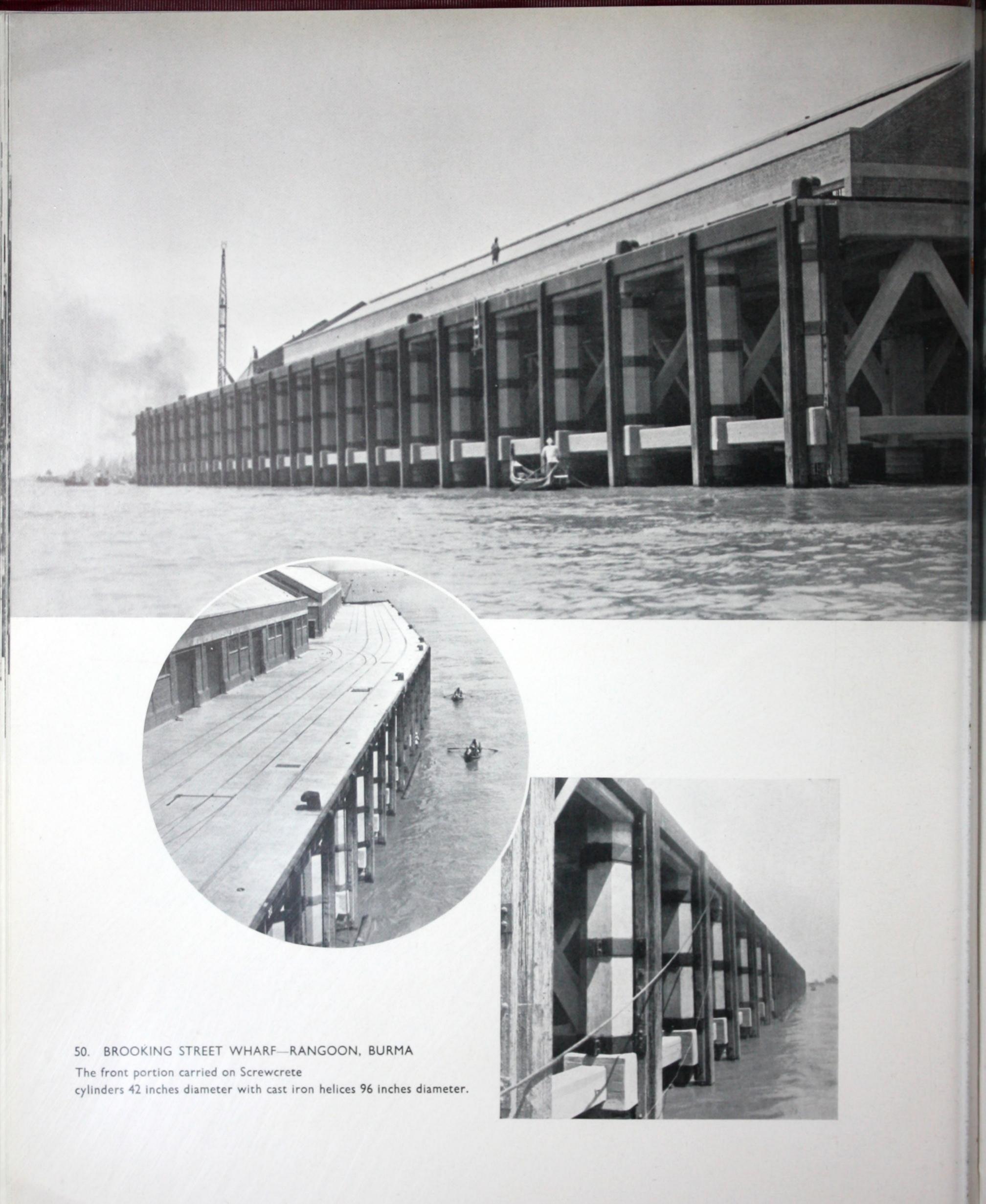
48. STRAND ROAD WHARF—CALCUTTA, INDIA

Screw pile wharf 665 feet long by 120 feet wide, carrying warehouse accommodation and supported on solid steel piles 6 inches diameter with cast iron helices 54 inches diameter



49. GARDEN REACH WHARVES-CALCUTTA, INDIA

On the River Hooghly, carrying warehouse accommodation. Supported on 5,000 solid steel piles 6 inches diameter with cast iron helices 54 inches diameter.





51. BROOKING STREET WHARF—RANGOON

During construction.





52. WHARVES-BEIRA, PORTUGUESE EAST AFRICA

Deep water wharf, 2,700 feet long, carried on 36 inches diameter cast Iron cylinders with 84 inches diameter cast steel helices. Wharf for barges carried on 7 inches diameter solid steel piles and 54 inches diameter cast iron helices.

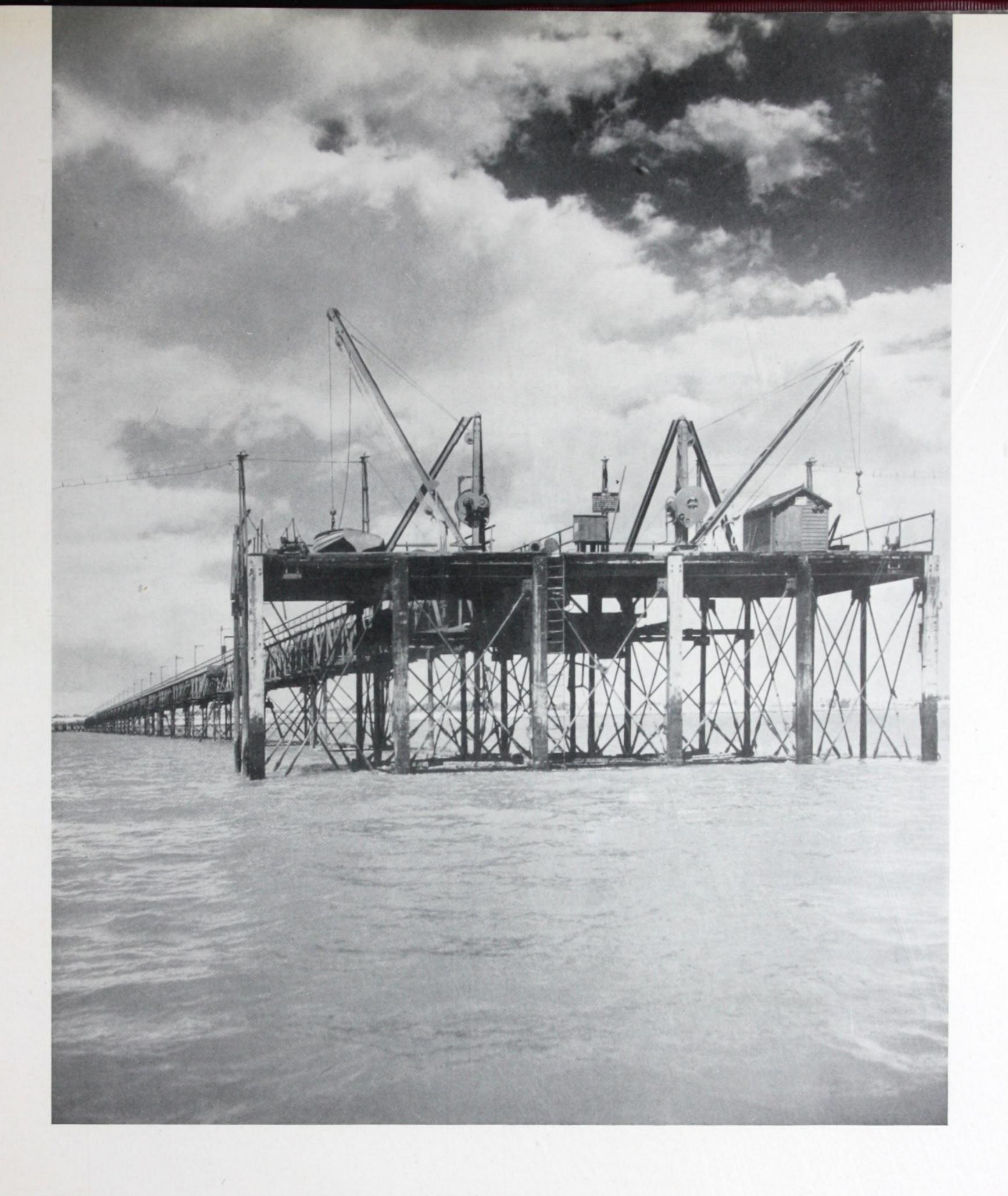




53. APPROACH JETTY—BEIRA, PORTUGUESE EAST AFRICA Supported on 6 inch diameter solid steel piles with 54 inches diameter helices.



54. DEEP WATER JETTY—PERSIAN GULF
Carried on 6 inches diameter solid steel piles with 48 inches
diameter cast iron helices.



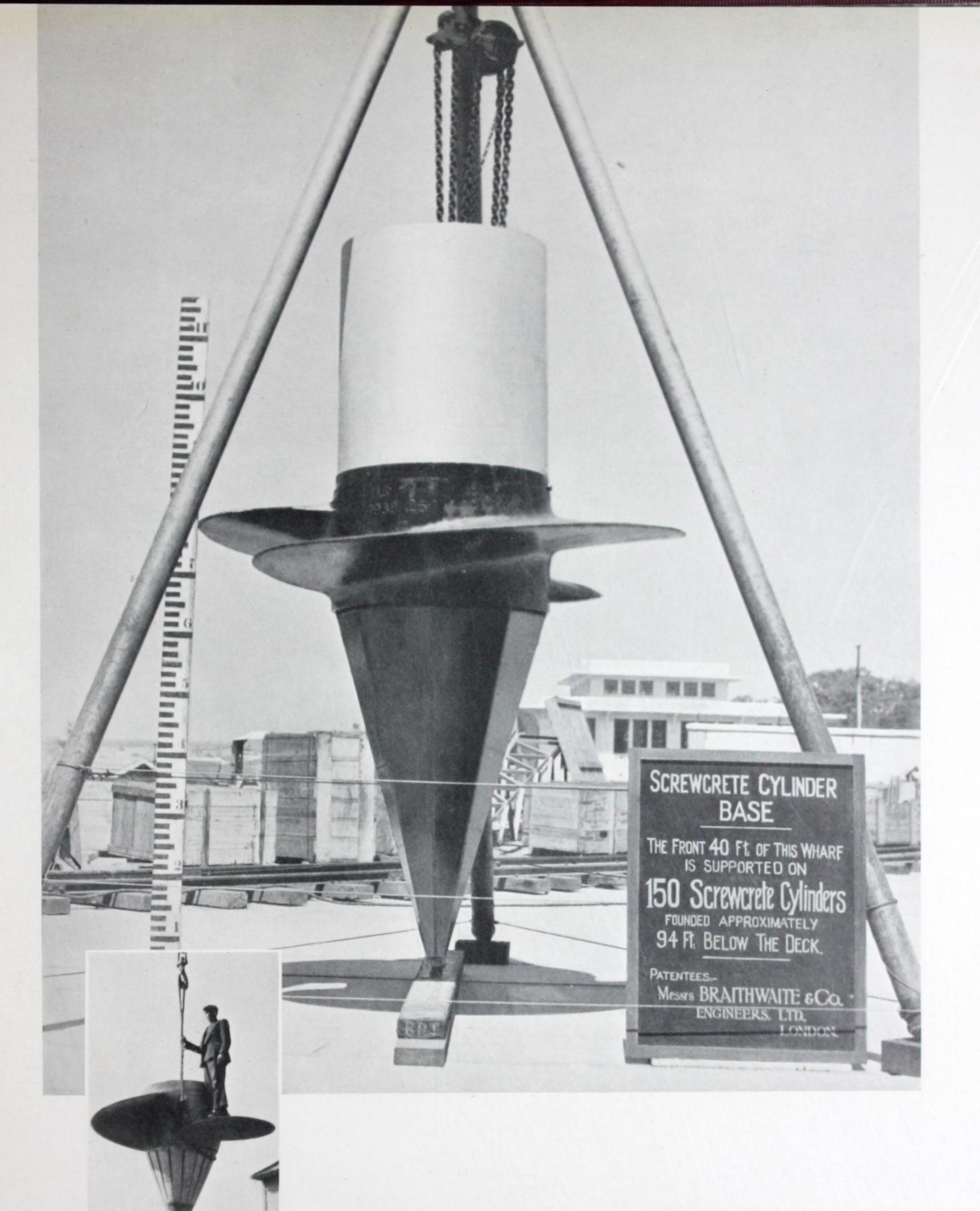
55. JETTY—BEE NESS, THAMES ESTUARY, ENGLAND

Carried on 6 inches diameter solid steel piles with 48 inches diameter cast iron helices.

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SCREWCRETE

SCREWCRETE

Screwcrete piles are the modern development of the older type of metal screw pile, sometimes referred to as the Mitchell pile. In the larger sizes, in which the diameter of the shaft may be as much as 3 ft. 6 ins., Screwcrete piles are often referred to as Screwcrete cylinders.

The principle upon which the system is based is briefly as follows:-

A cylindrical casing of welded steel sheet or, in some instances, reinforced concrete, is connected at its lower end to a helix which usually consists of cast iron or, in the larger sizes, welded mild steel or reinforced concrete. A mandril of special design is connected directly to the helix, and also the casing at suitable intervals by means of expanding grips. The whole assembly is pitched in position and screwed to the necessary depth by means of electrically driven screwing plant. The mandril is then disconnected from the helix and casing, and withdrawn. Any water which may have found its way into the casing is removed and a reinforced concrete column is moulded inside the casing.

In order to prevent the entry of water, the helix is usually provided with a water-tight pointed nose. Provision is made in the nose itself for water-jetting, if the nature of the strata through which the pile has to pass renders this procedure necessary.

Screwcrete piles and cylinders are most suitable for use in conditions which necessitate driving piles through water in order to carry a superstructure which imposes heavy concentrated vertical loads on the cylinders in addition to lateral forces. Such conditions are met with in the case of deep water wharves and jetties and the intermediate piers of river-crossing bridges.

The principle of the Screwcrete pile permits the shaft to be designed to resist lateral loads without the use of under-water bracing. The result is a form of construction which is both economical in cost and rapid in execution.

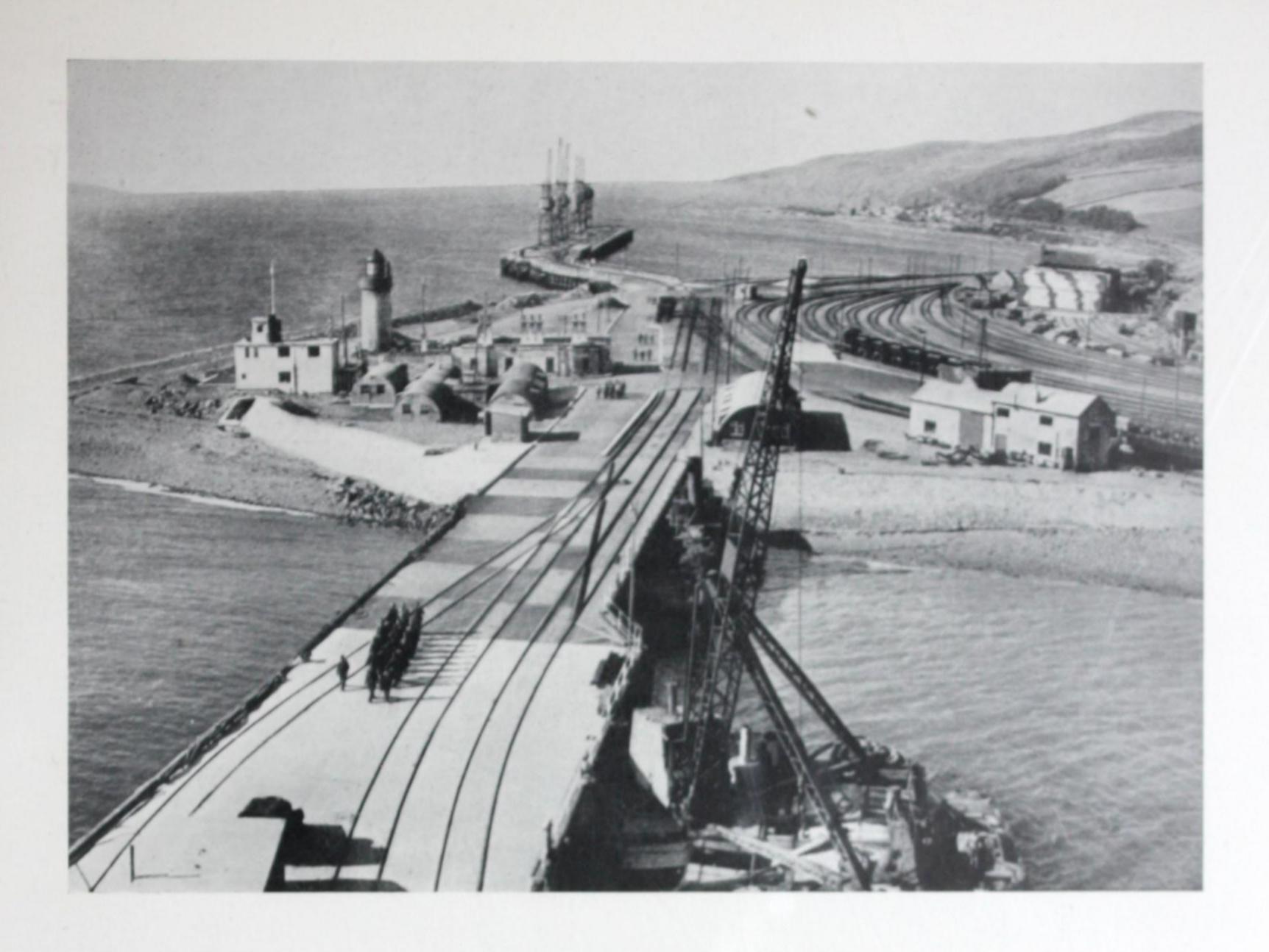
When these conditions do not exist, as on a normal dry land building site, the use of Screwcrete piles is only justified in special circumstances such as those in which the vibration caused by driving piles would be objectionable.

The depth to which Screwcrete piles are driven is usually determined by a soil investigation based on the modern principles of soil mechanics.

Owing to the large bearing area provided by the helix the penetration of Screwcrete piles is usually considerably less than that which is necessary when other types are used.

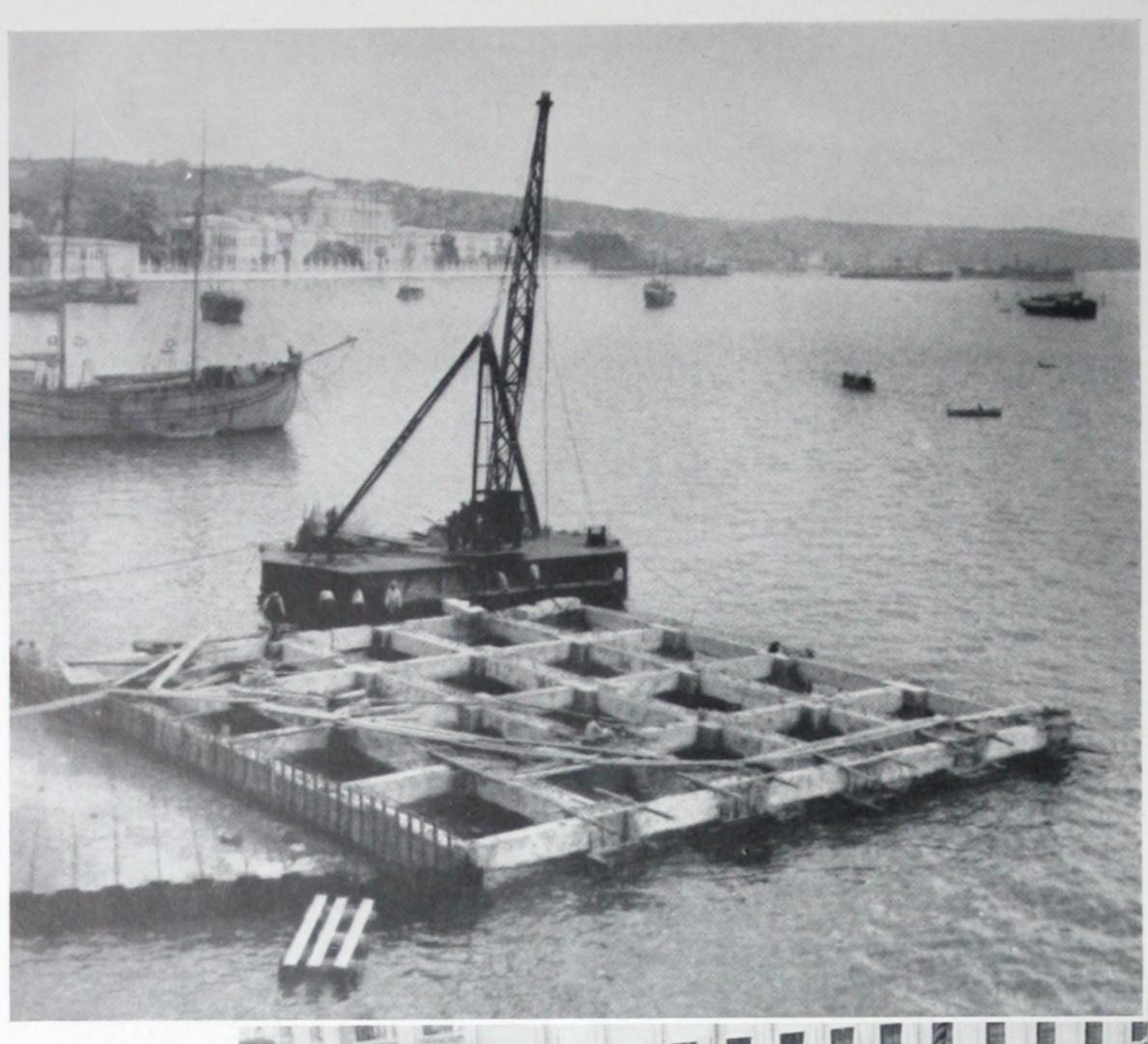
In compact sand and similar types of strata, Screwcrete cylinders are each capable of carrying loads of 400 tons or more, in addition to the bending moments produced by lateral forces.

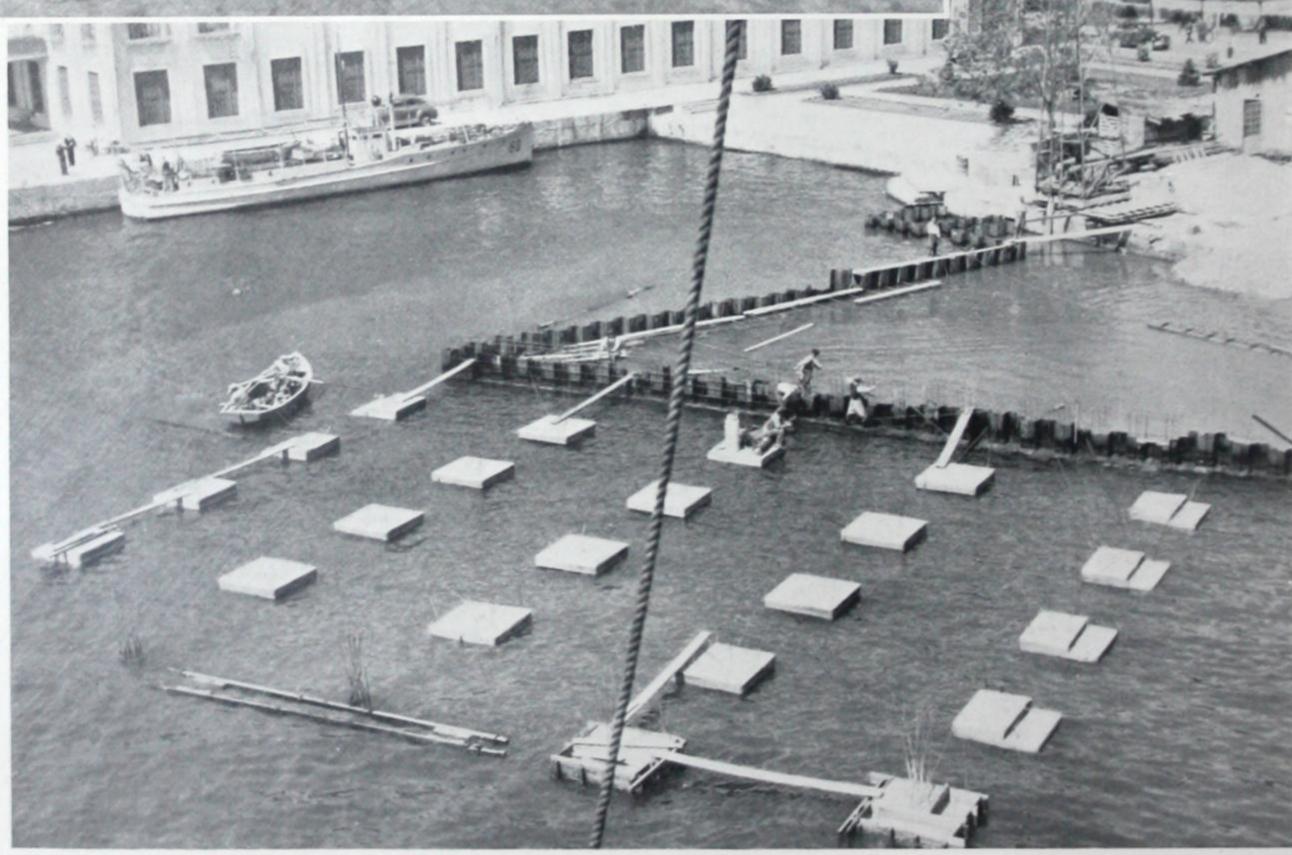
When calculated on the basis of cost per ton of carrying capacity, the cost of Screwcrete piles, used in the conditions described above, will usually be found to be less than that of most other forms of construction.



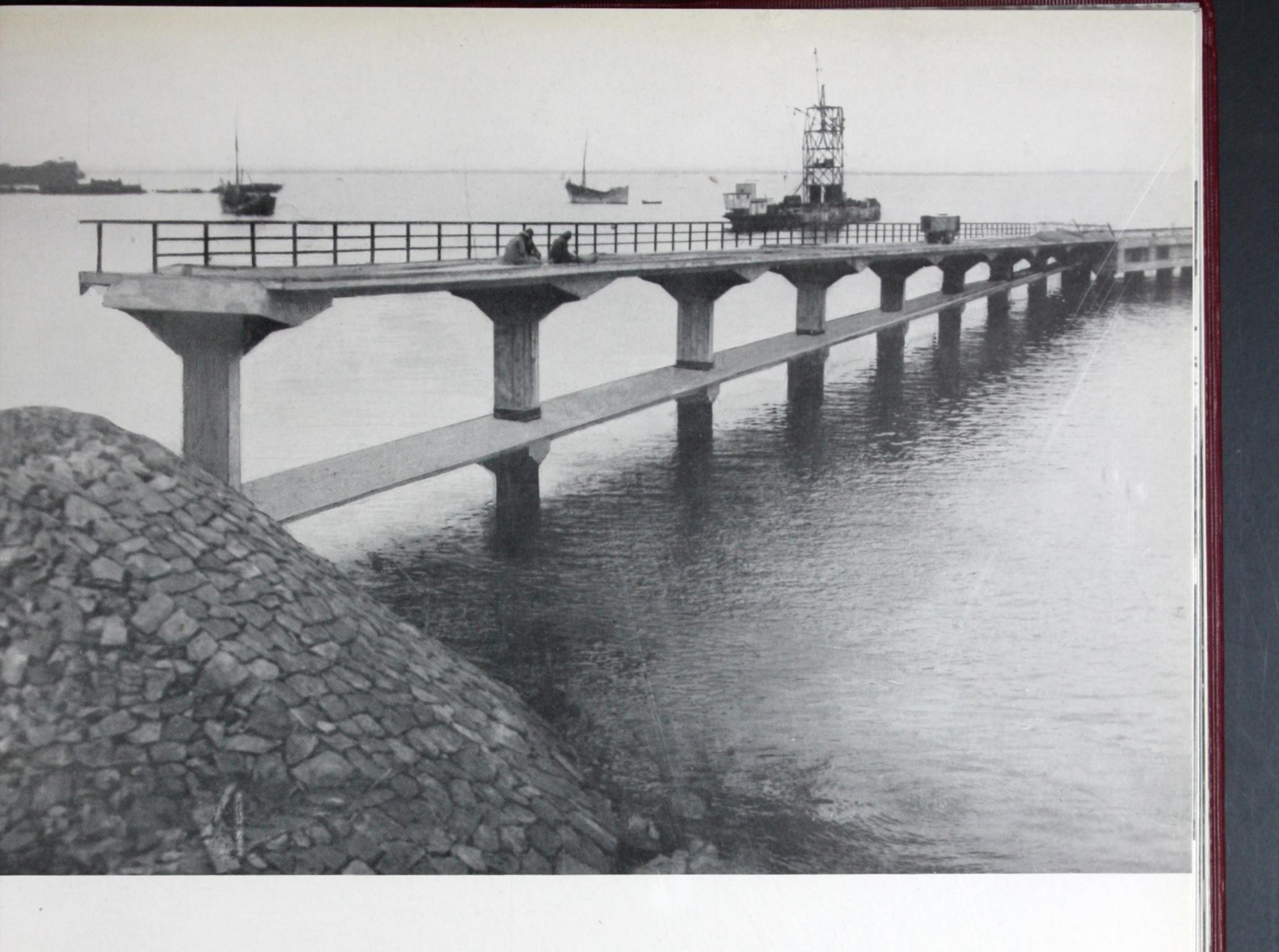


56. TWO DEEP WATER WHARVES— WEST COAST, SCOTLAND





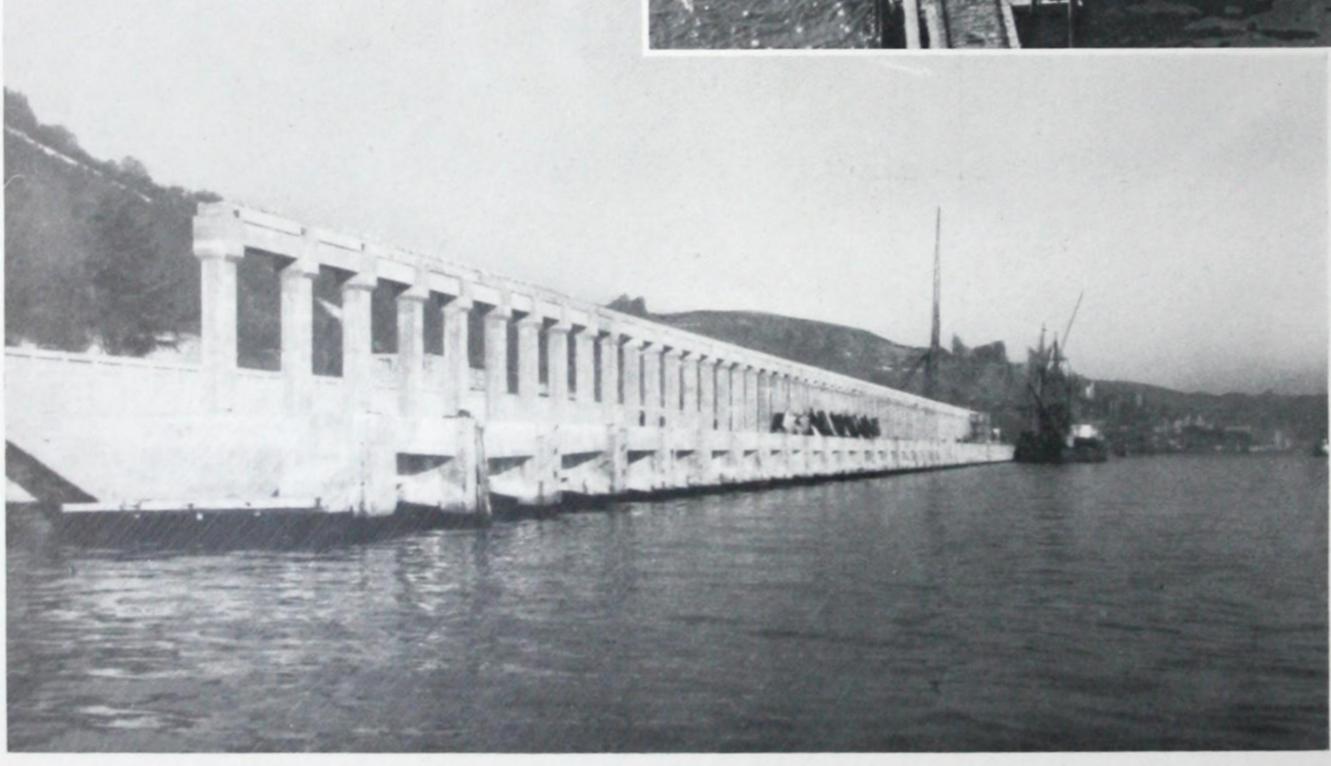
57. JETTY AT KABATAS—TURKEY
Reinforced concrete caps cast on the heads of the 19 inches diameter
Screwcrete piles.

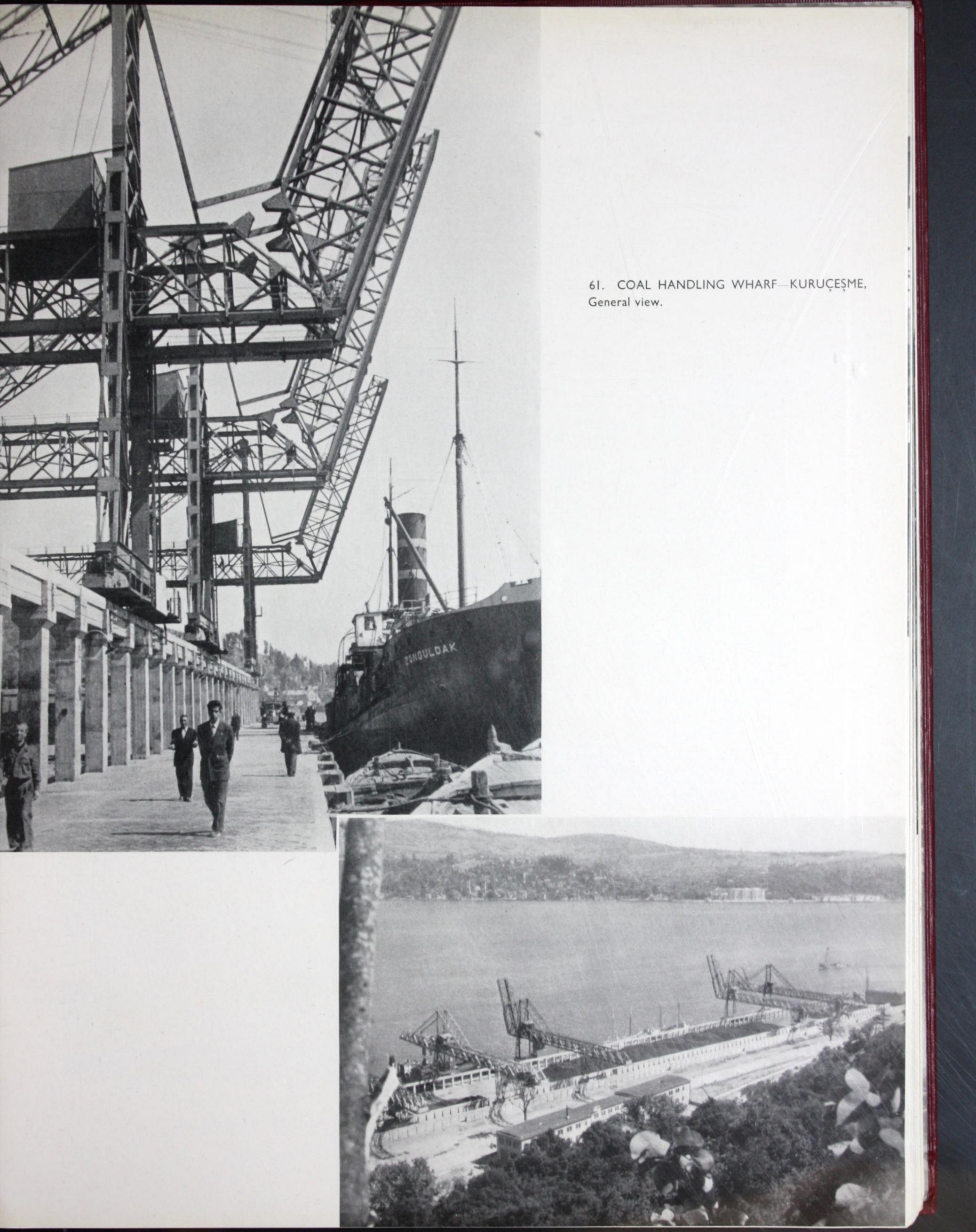


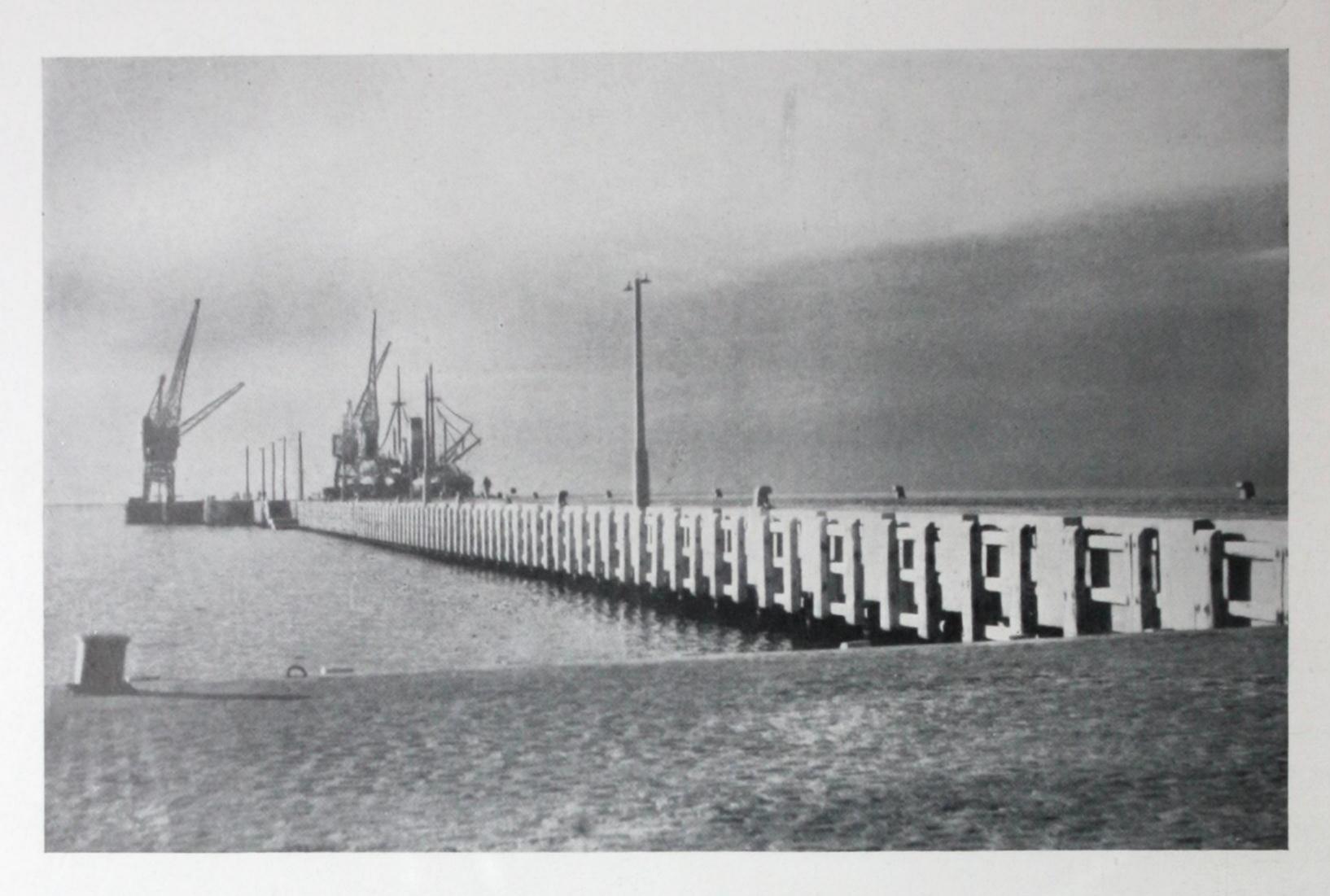
58. DEEP WATER JETTY—IZMIT, TURKEY
Reinforced concrete jetty supported on Screwcrete cylinders.

59. COAL HANDLING WHARF—KURUÇEŞME, During construction.









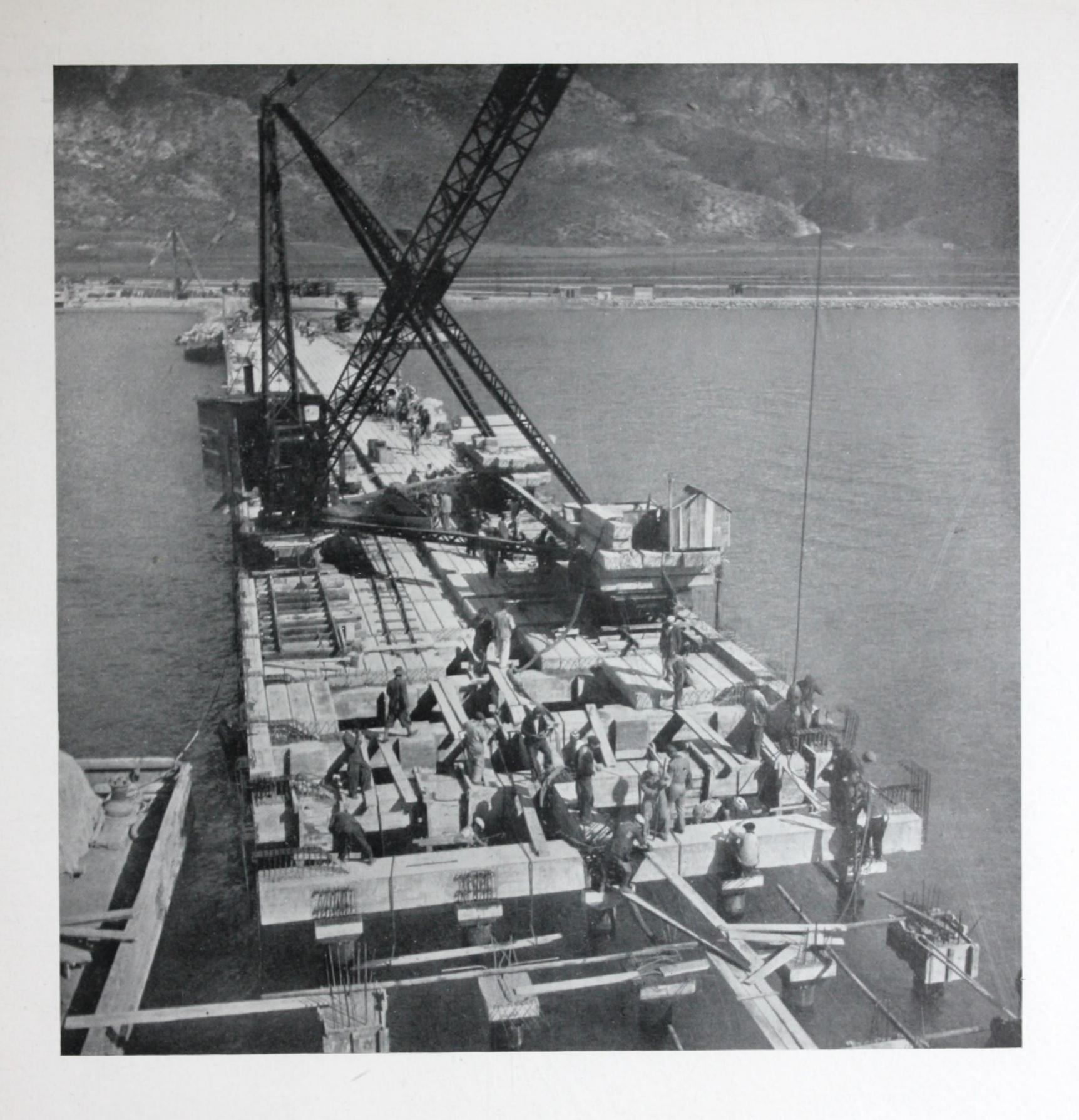
62. DEEP WATER JETTY—ISKENDERUN, TURKEY

Jetty for the Turkish Ministry of Communications.

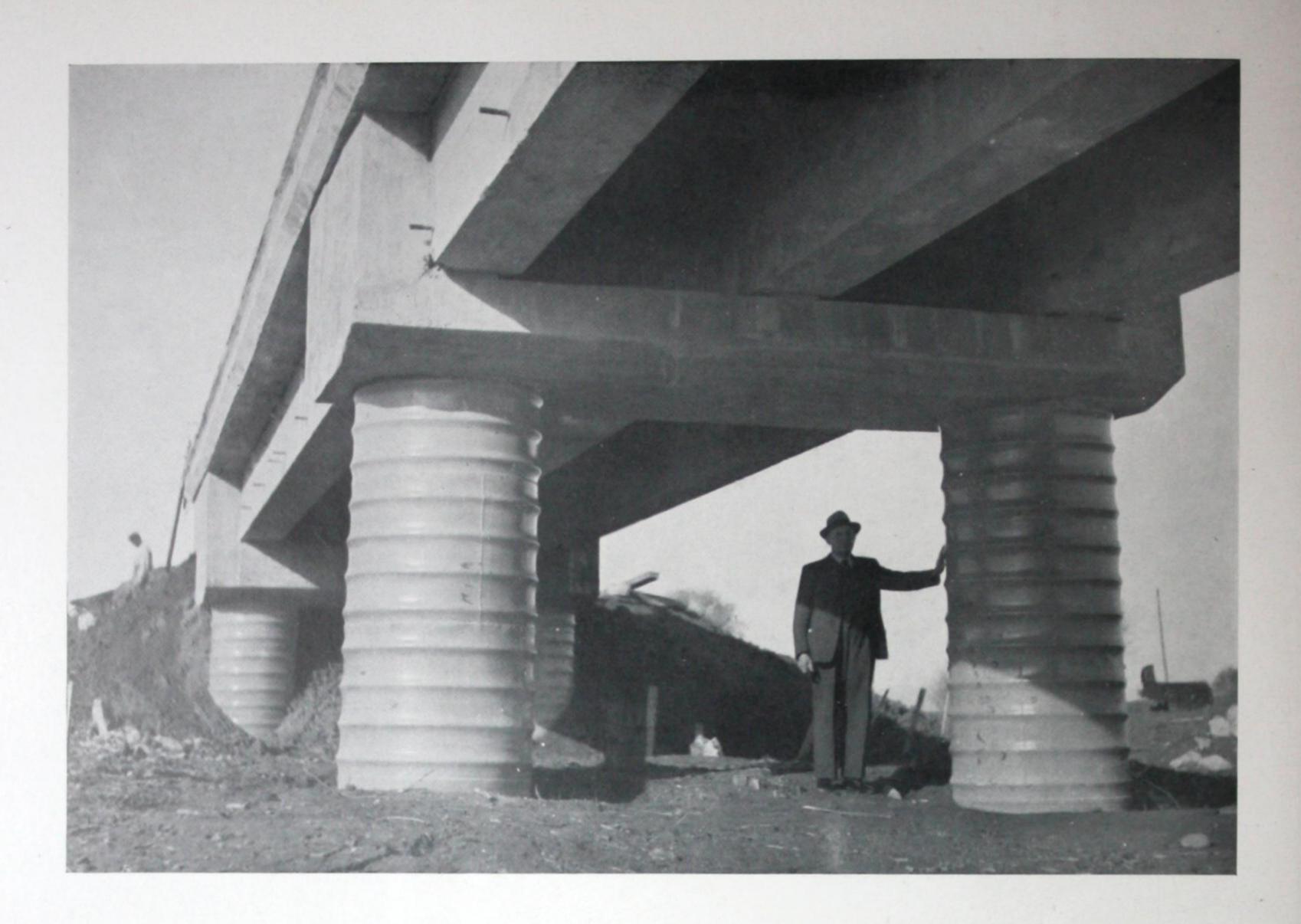
Supported on Screwcrete cylinders.



63. DEEP WATER JETTY—ISKENDERUN



64. DEEP WATER JETTY—ISKENDERUN, During construction.



65. BERGAMA BRIDGE—TURKEY
Reinforced concrete road bridge carried on
Screwcrete cylinder piers.



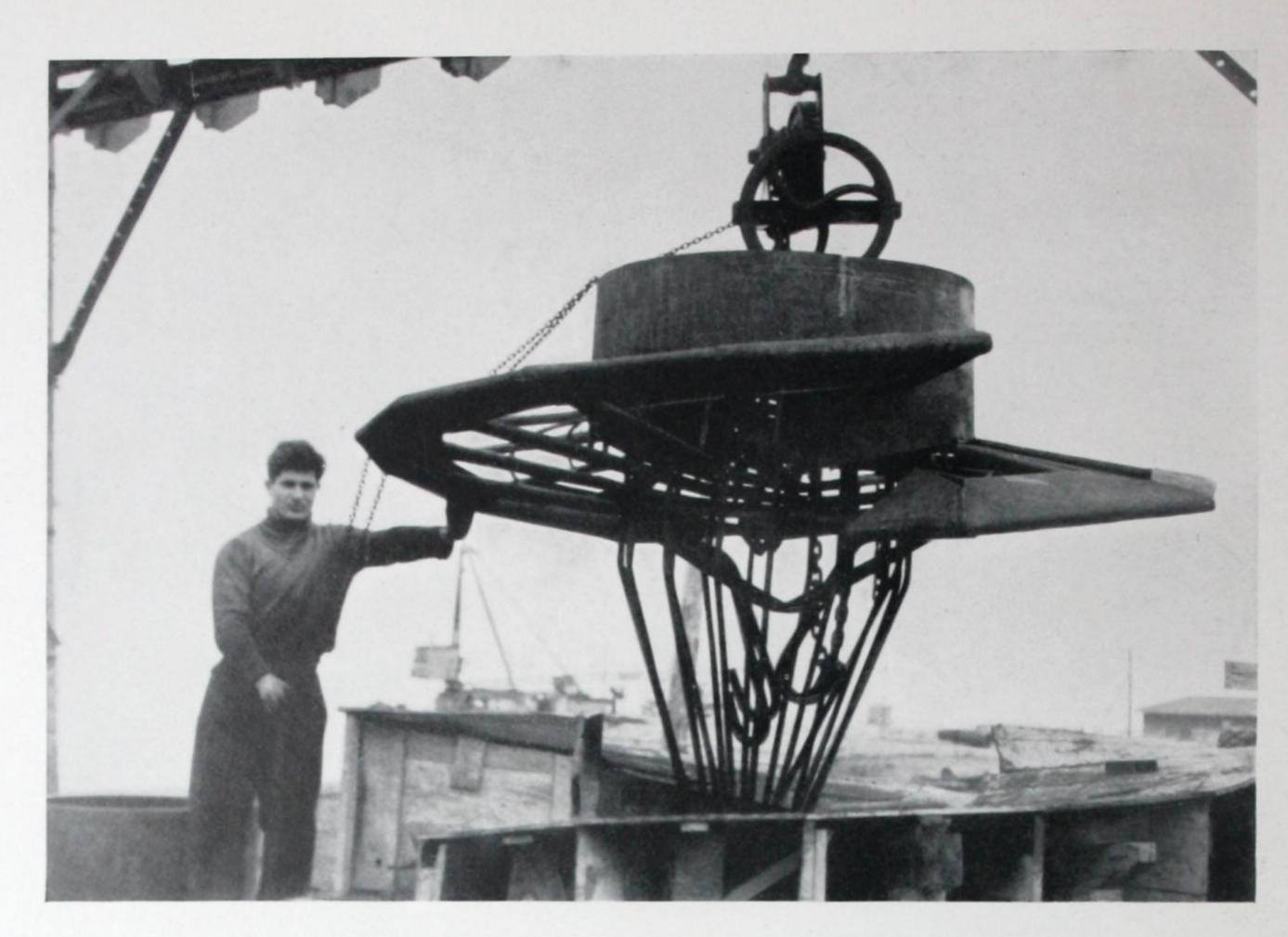
66. BERGAMA BRIDGE



67. PESHAWAR VALE—PAKISTAN

One of four road bridges carried on

Screwcrete cylinder piers.

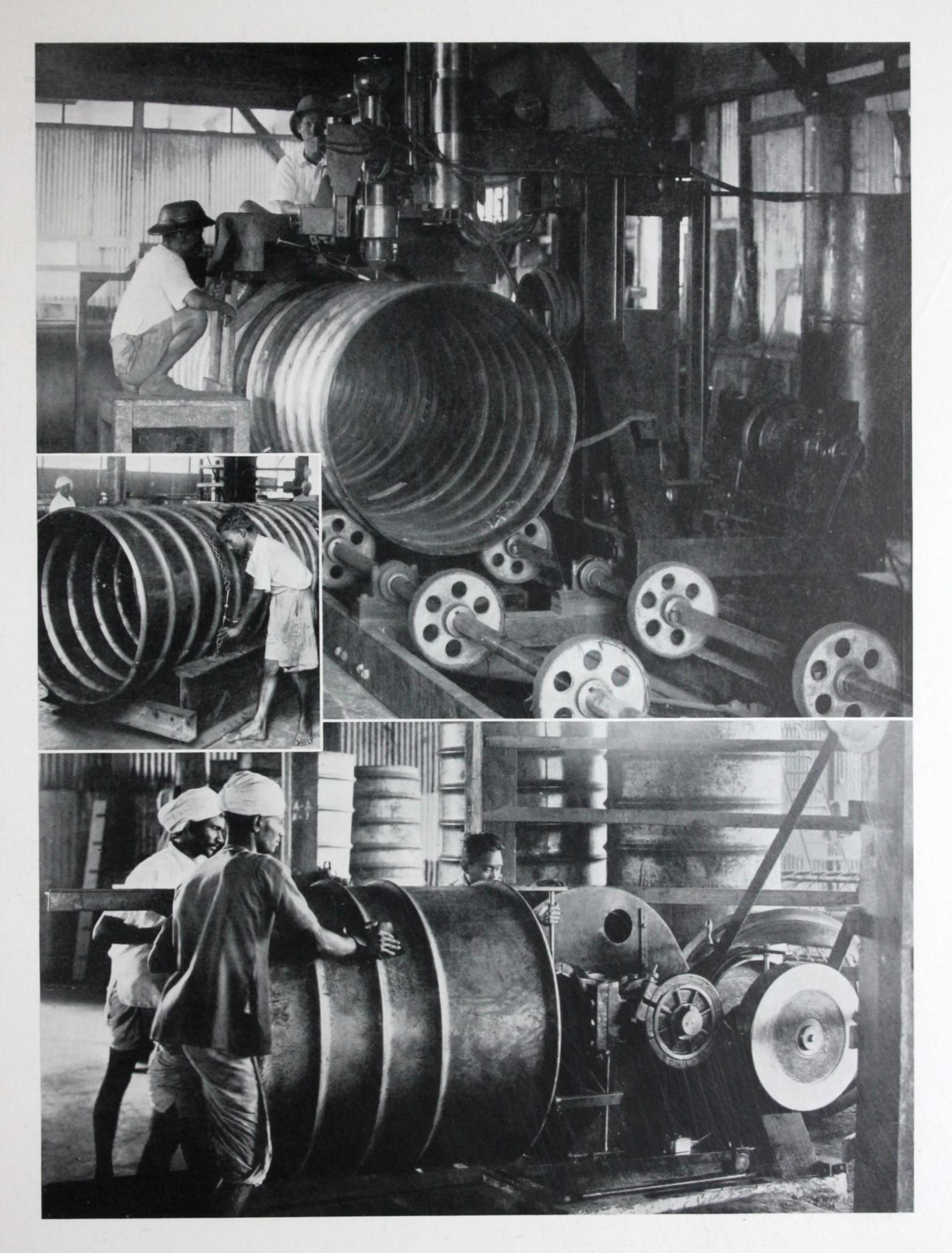


68. REINFORCEMENT OF CONCRETE HELIX PREPARATORY TO CASTING

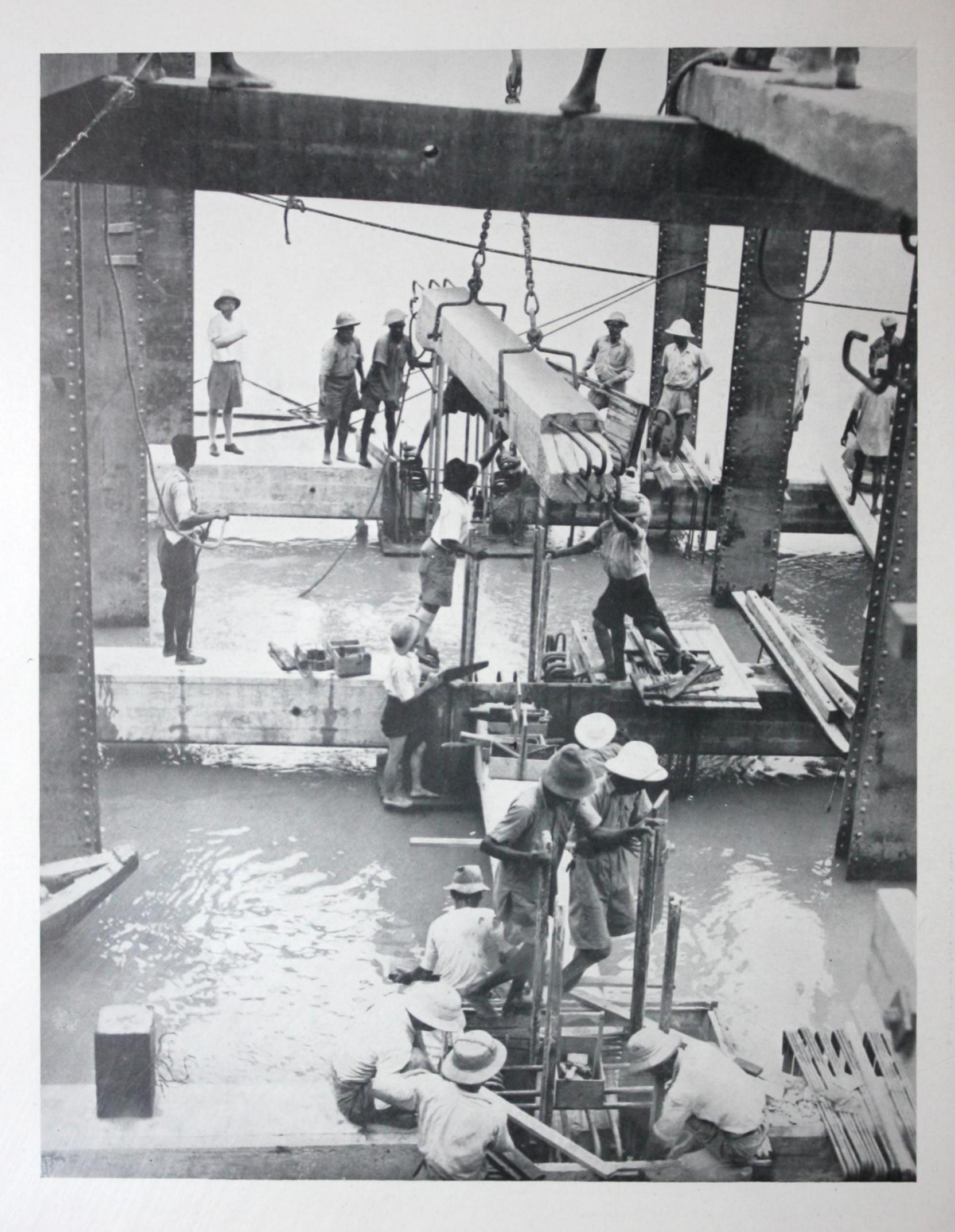


69. REINFORCED CONCRETE HELIX.

Attached to Screwcrete cylinder ready for screwing.



70. FABRICATION OF SCREWCRETE CYLINDERS



71. PLACING PRECAST CONCRETE BRACING UNITS
TO SCREWCRETE CYLINDERS



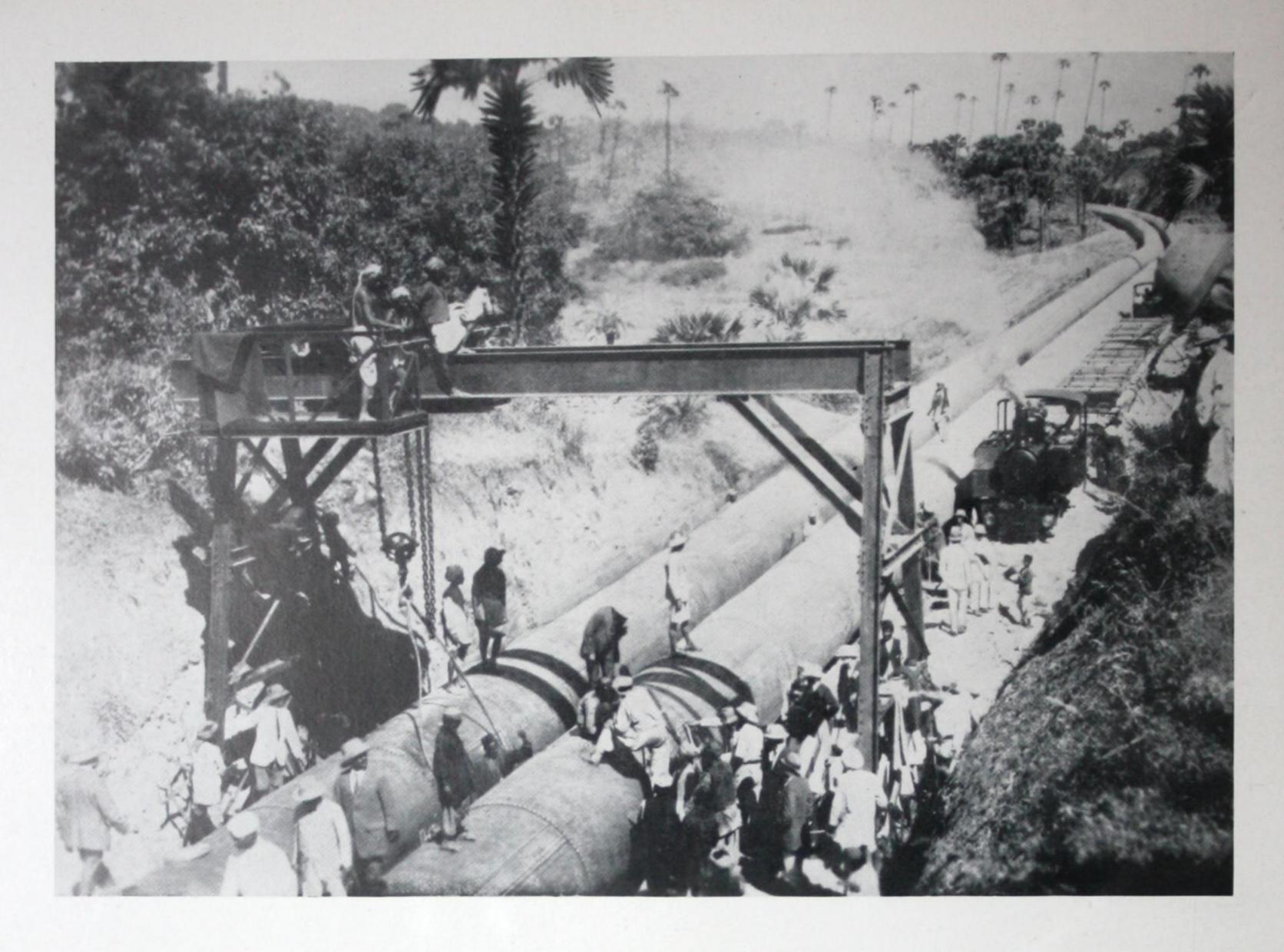
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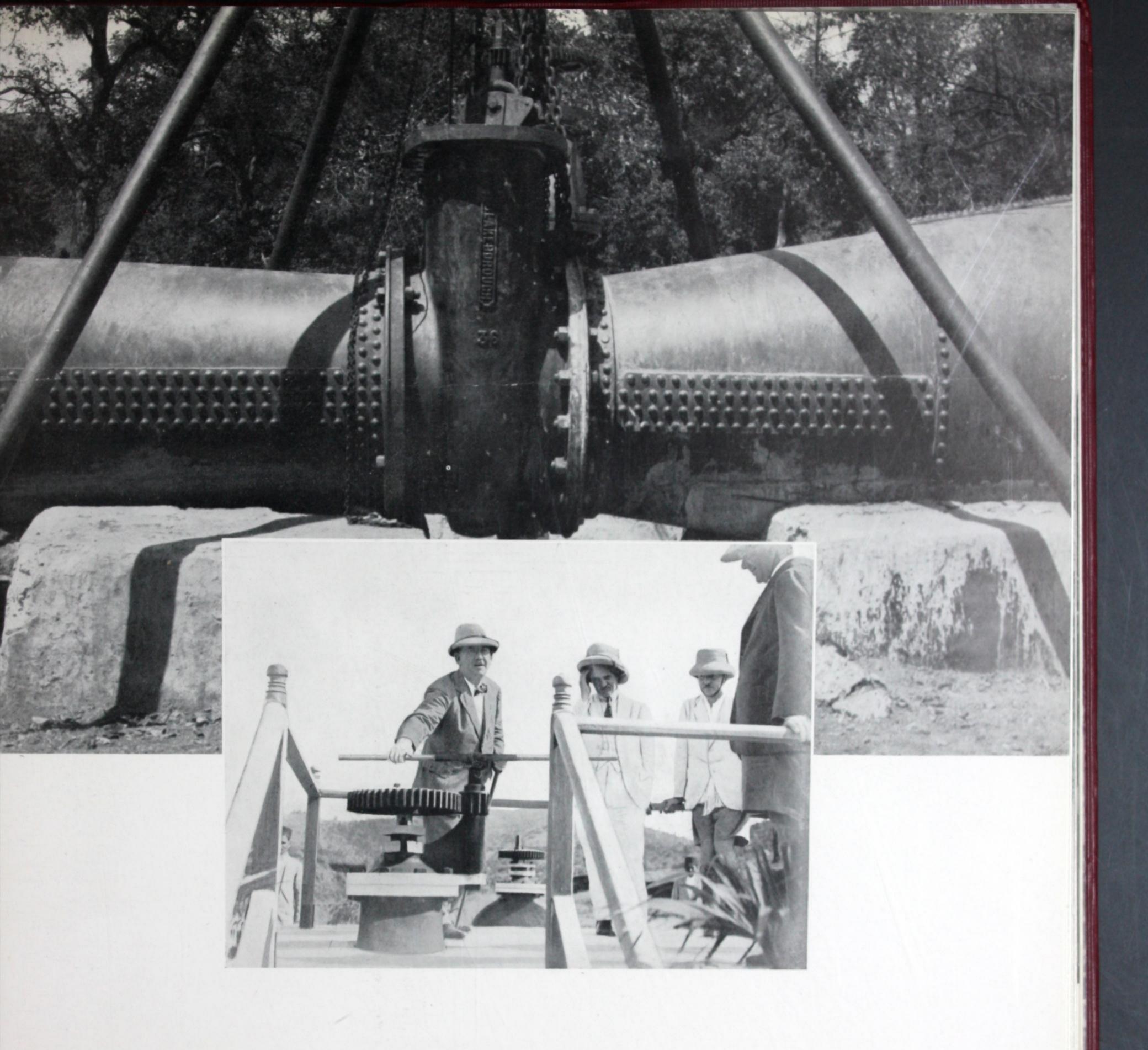
PIPELINES



74. LAKE TANSA PIPELINE—BOMBAY, INDIA
110 miles of riveted steel pipes 57 and 72 inches diameter involving 98,000 tons of pipes.



75. LAKE TANSA PIPELINE—BOMBAY



76. LAKE TANSA PIPELINE, BOMBAY

Top: One of the valves. Inset: The official opening.



77. KASHELI BRIDGE—INDIA

Across Bassein Creek, near Bombay to carry a roadway and 72 inches diameter riveted water mains to supply water to Bombay.



78. PIPELINE-RANGOON

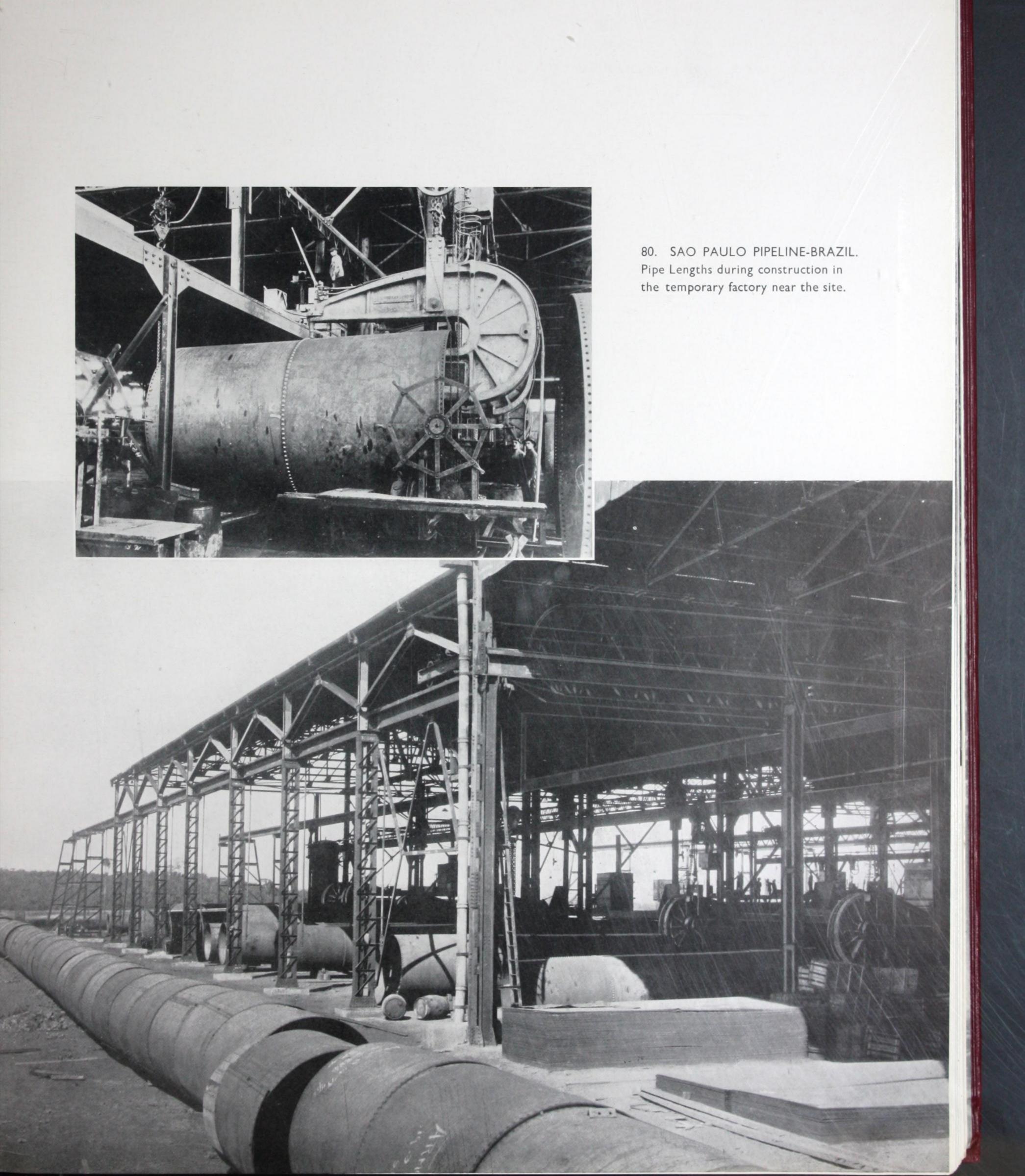
43 miles of welded steel pipe, 56 inches diameter, with spun concrete lining.

Manufactured and laid by the Braithwaite,

Burn & Jessop Construction Company, Ltd.



79. SAO PAULO PIPELINE—BRAZIL
Steel water mains 2.5 and 1.8 metres diameter which required 20,000 tons of pipes.



81. RISING MAIN-KAFR FAROUK, EGYPT

8 miles of welded steel pipes 46 and 60 inches diameter with spun bitumen lining.

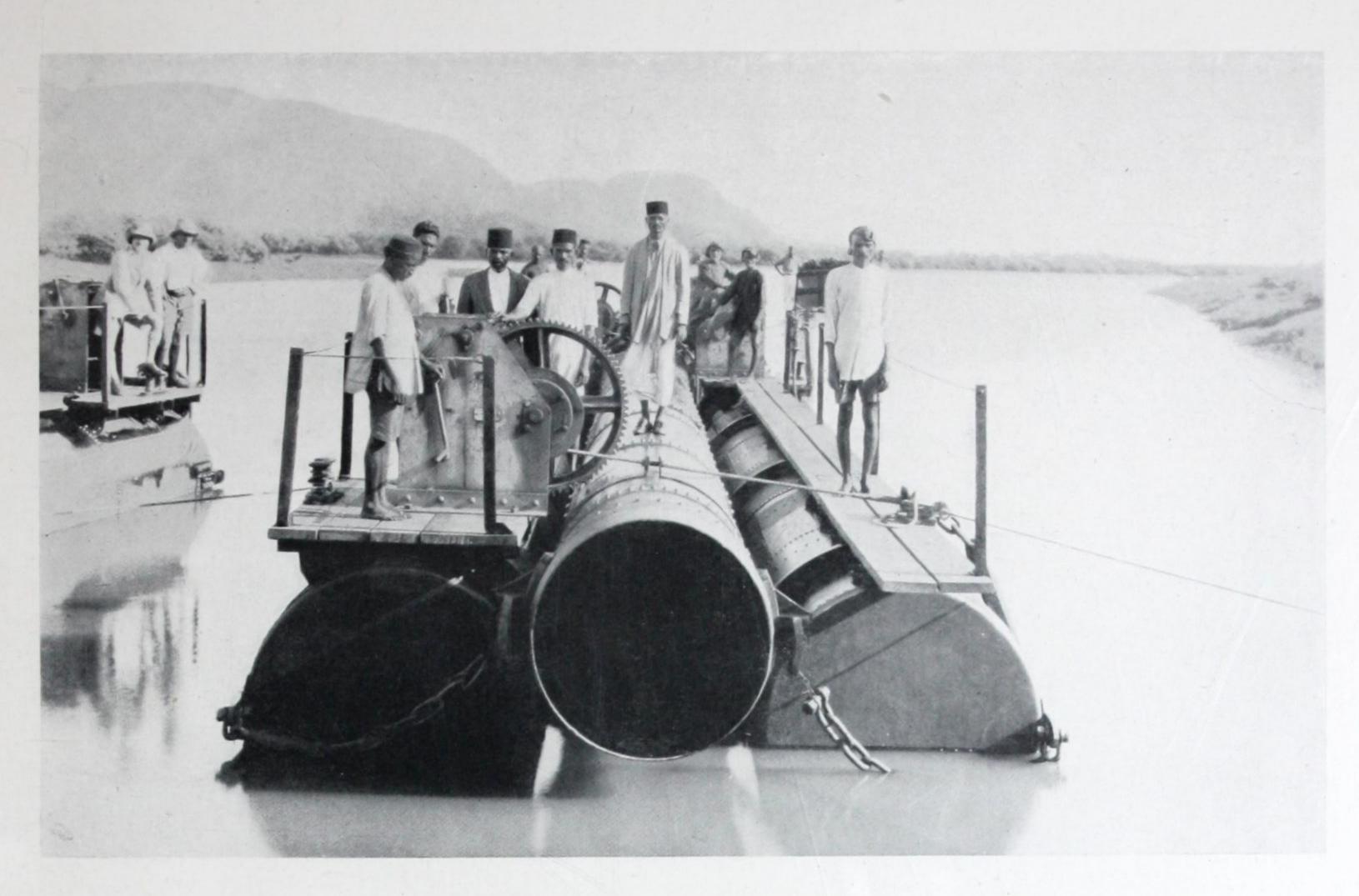
81a. Pipes awaiting despatch in the factory at Port Said.



82. Train of pipes leaving the Port Said Factory.



83. Laying pipes.



84. BOMBAY BACK BAY RECLAMATION

Riveted floating pipeline, 36 inches diameter, for pumping dredged material.

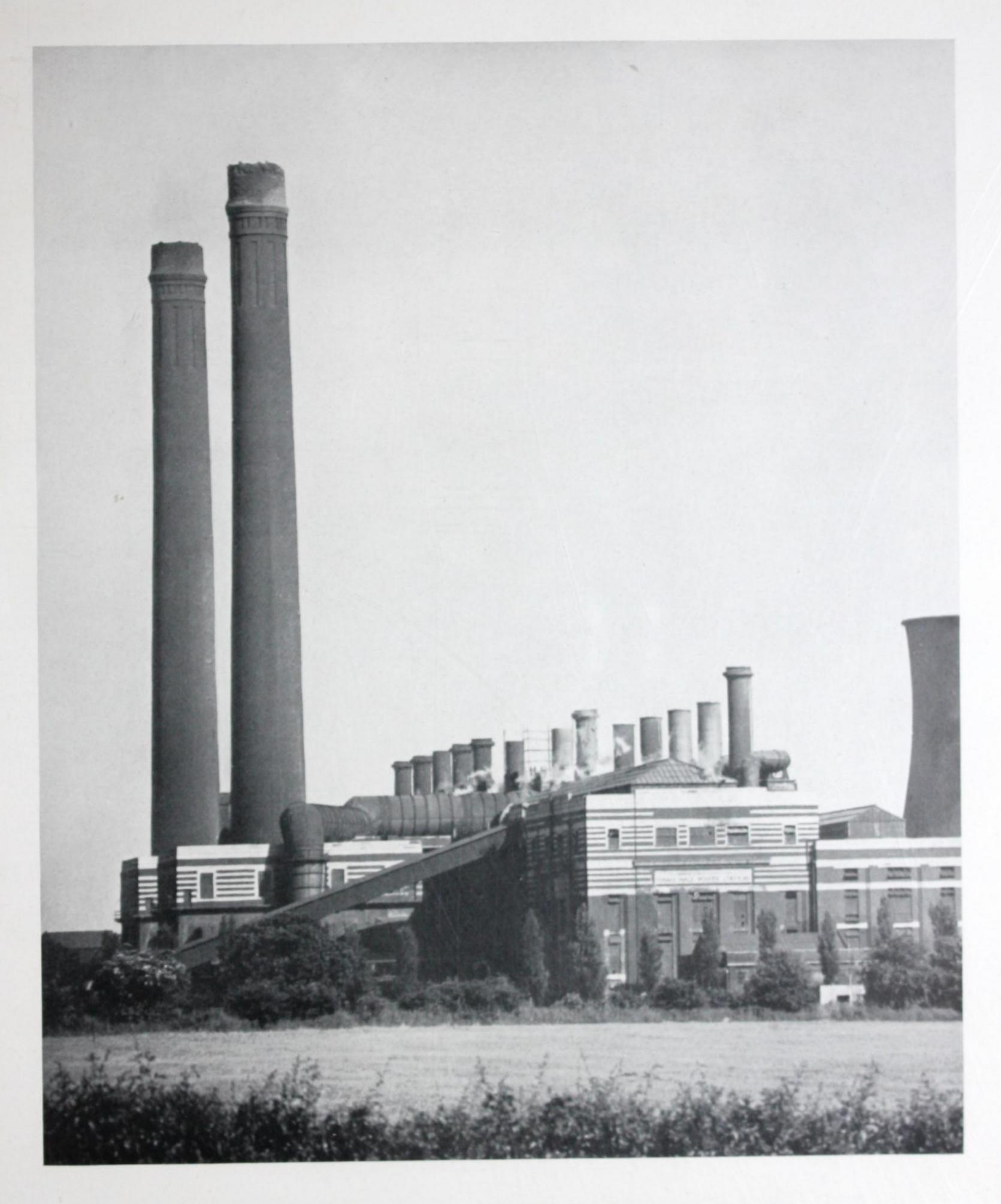


85. BOMBAY BACK BAY RECLAMATION

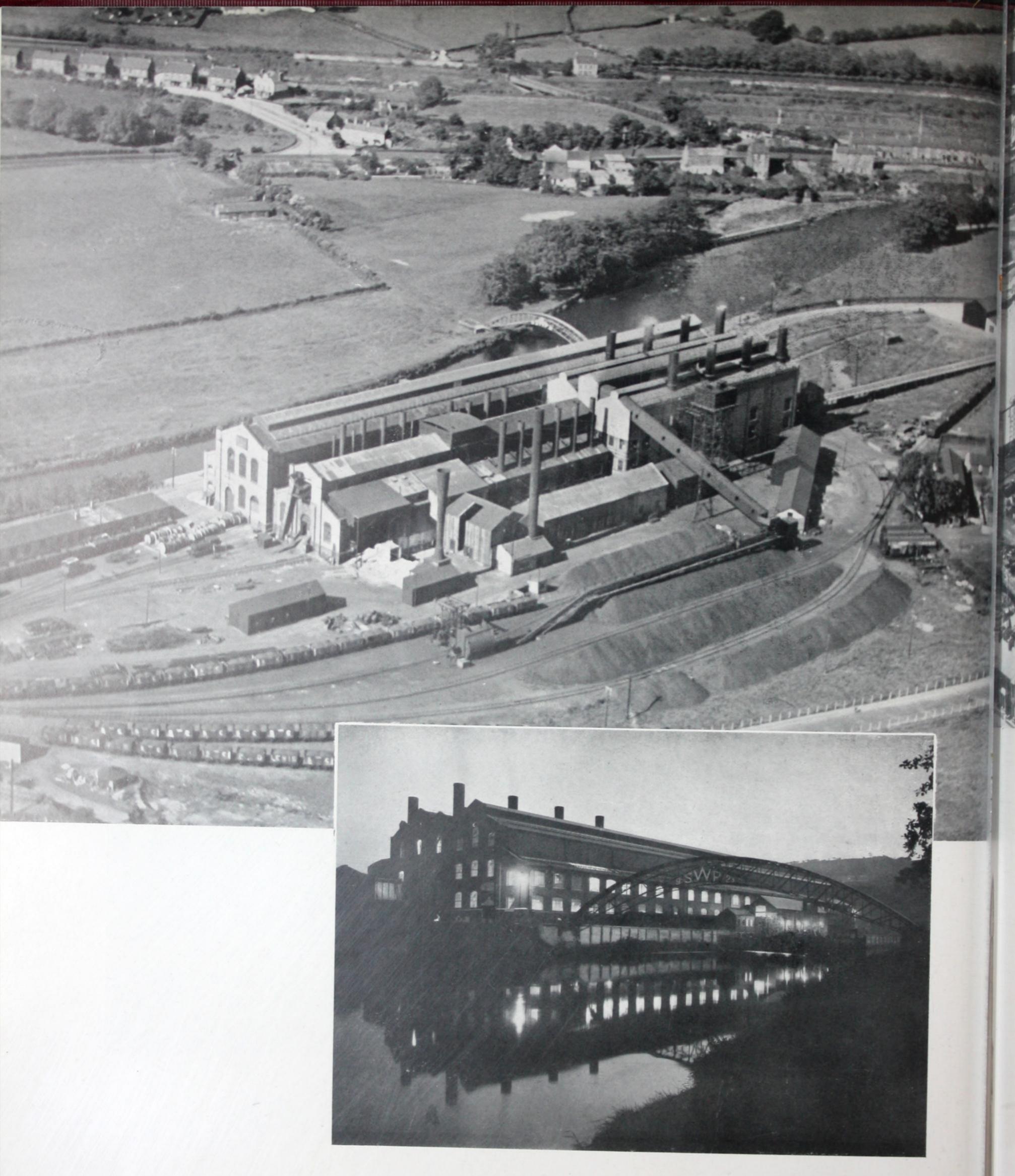
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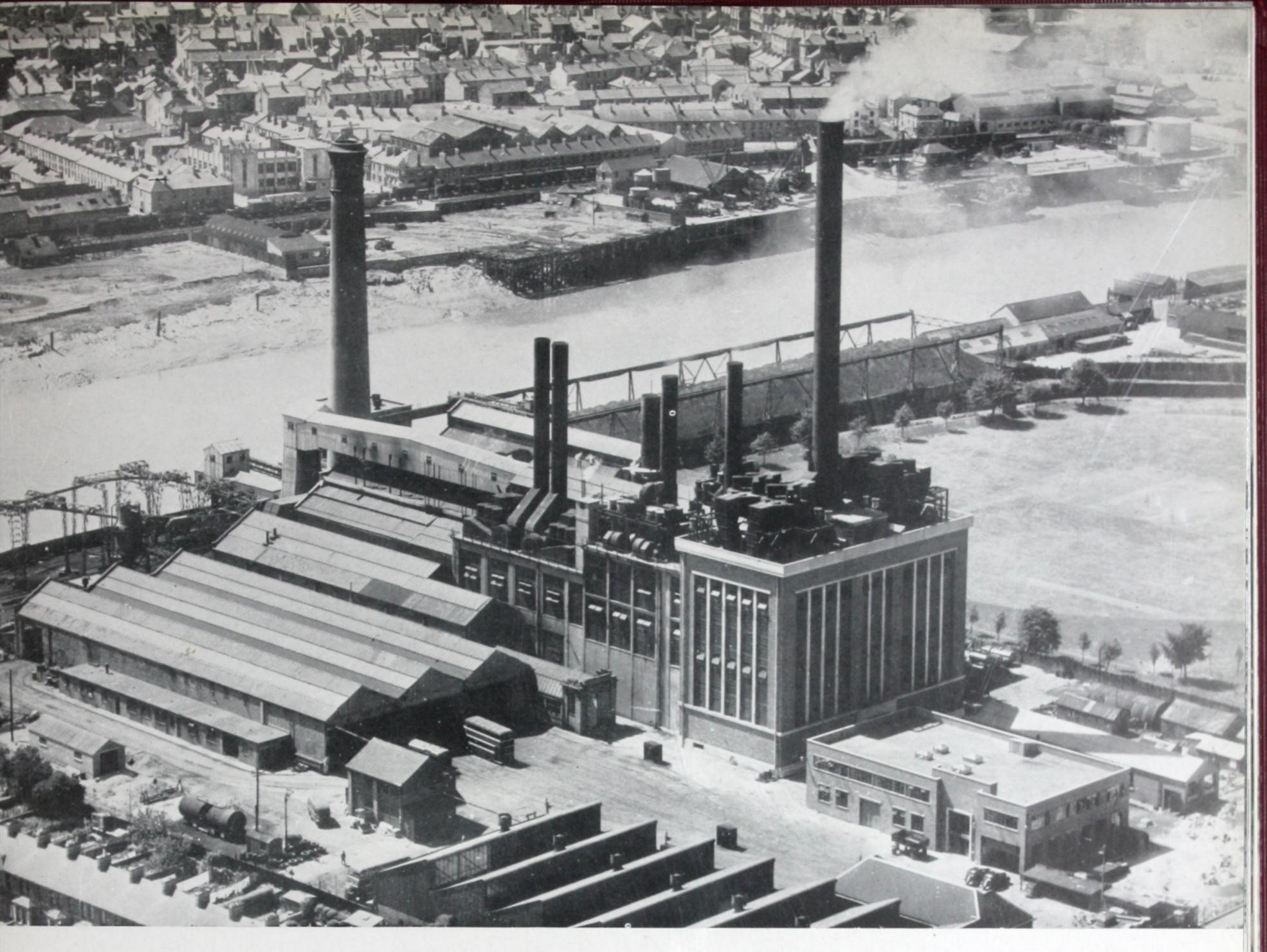




POWER STATIONS



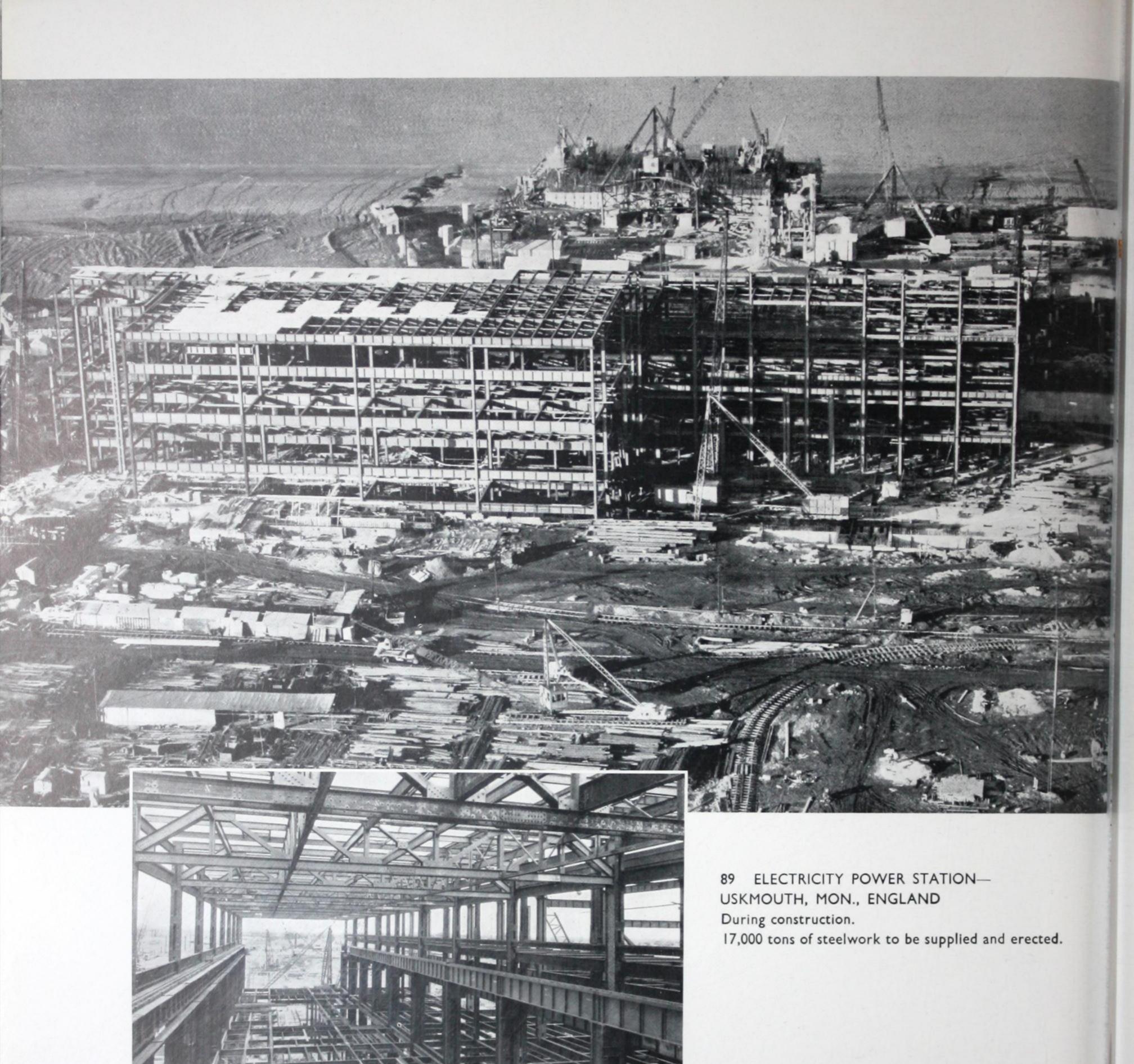
86. ELECTRICITY POWER STATION—TREFOREST, SOUTH WALES
For the former South Wales Electric Power Distribution Co., Ltd. Steelwork supplied and erected.



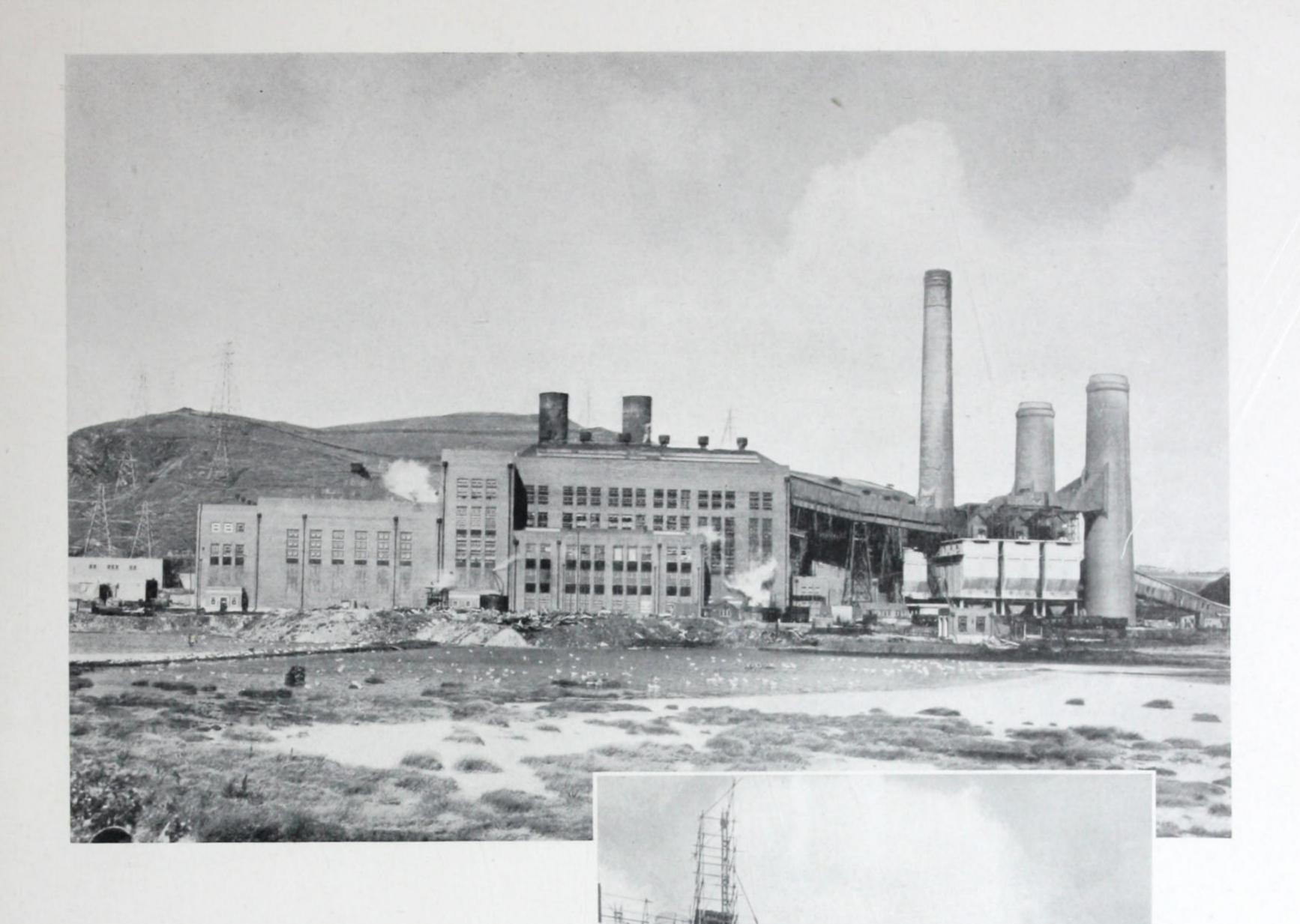
87. ELECTRICITY POWER STATION—NEWPORT, MON., ENGLAND steelwork supplied and erected.



88. ELECTRICITY POWER STATION—BRIMSDOWN, LONDON For the former North Metropolitan Power Co., of London.



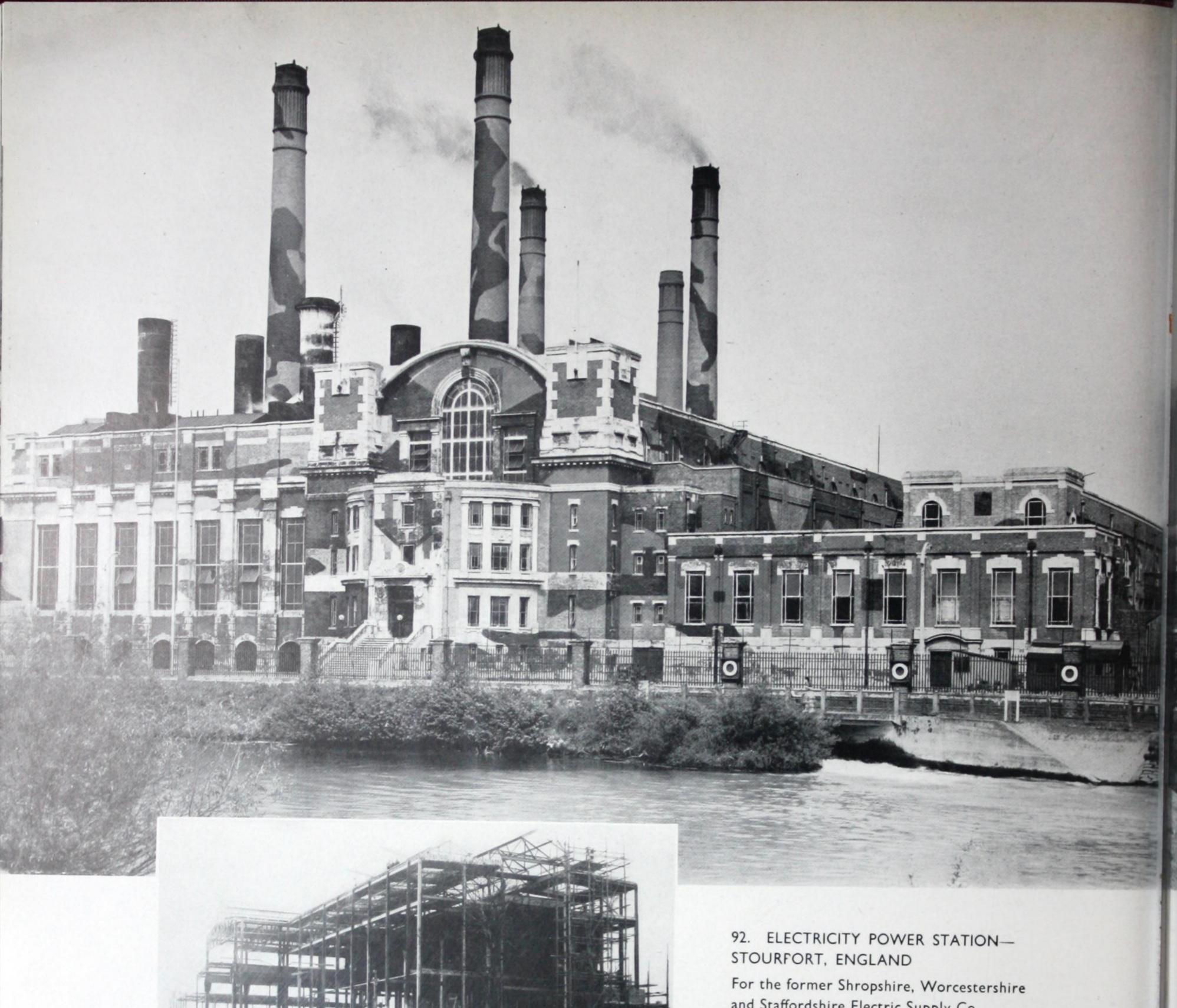
90. ELECTRICITY POWER STATION—USKMOUTH Detail of structural steelwork.



91. ELECTRICITY POWER STATION—SOUTH WALES

For the Corporation of Swansea.

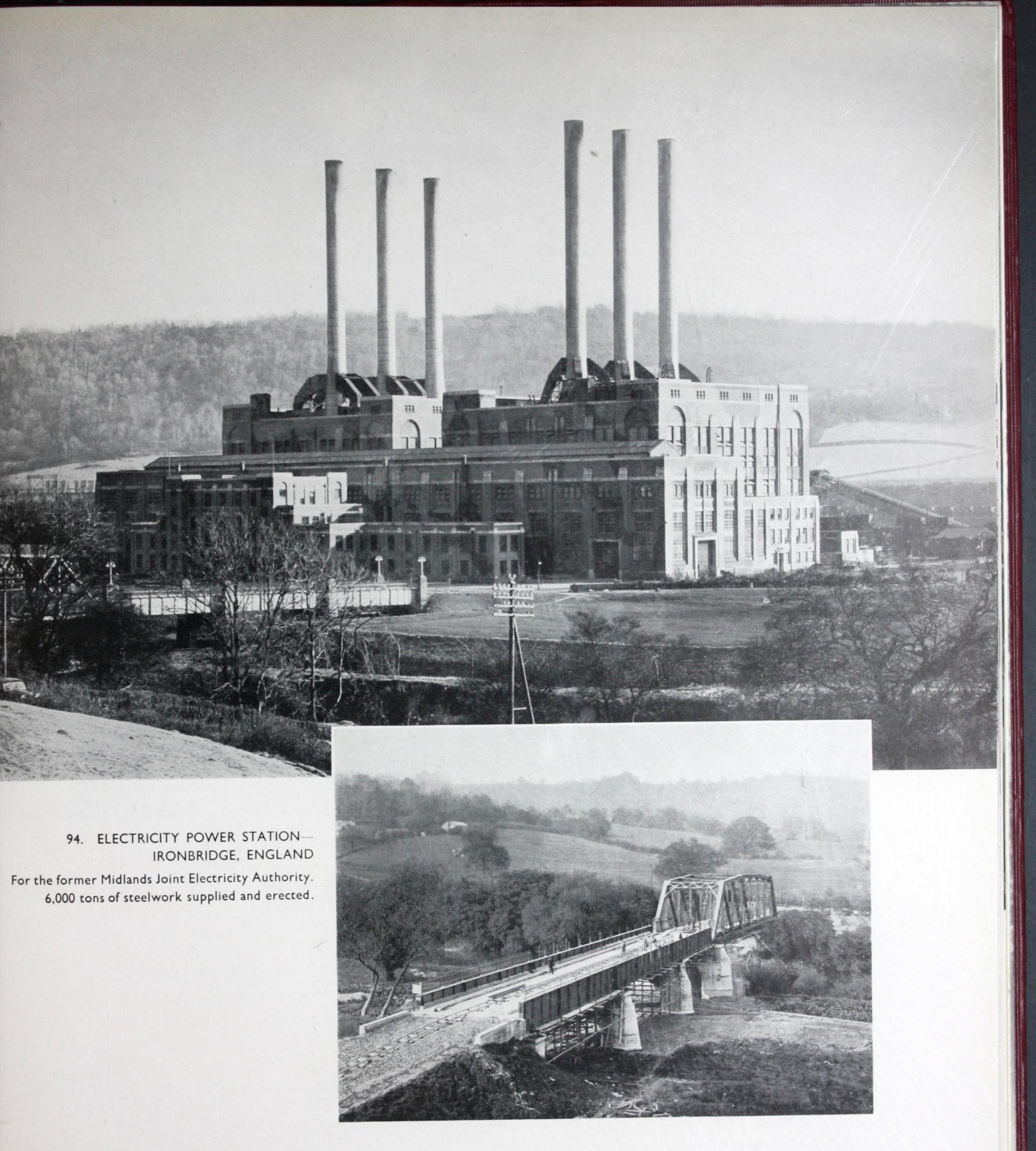
8,000 tons of steelwork supplied and erected.



For the former Shropshire, Worcestershire and Staffordshire Electric Supply Co. Steelwork supplied and erected.

93. STOURPORT POWER STATION

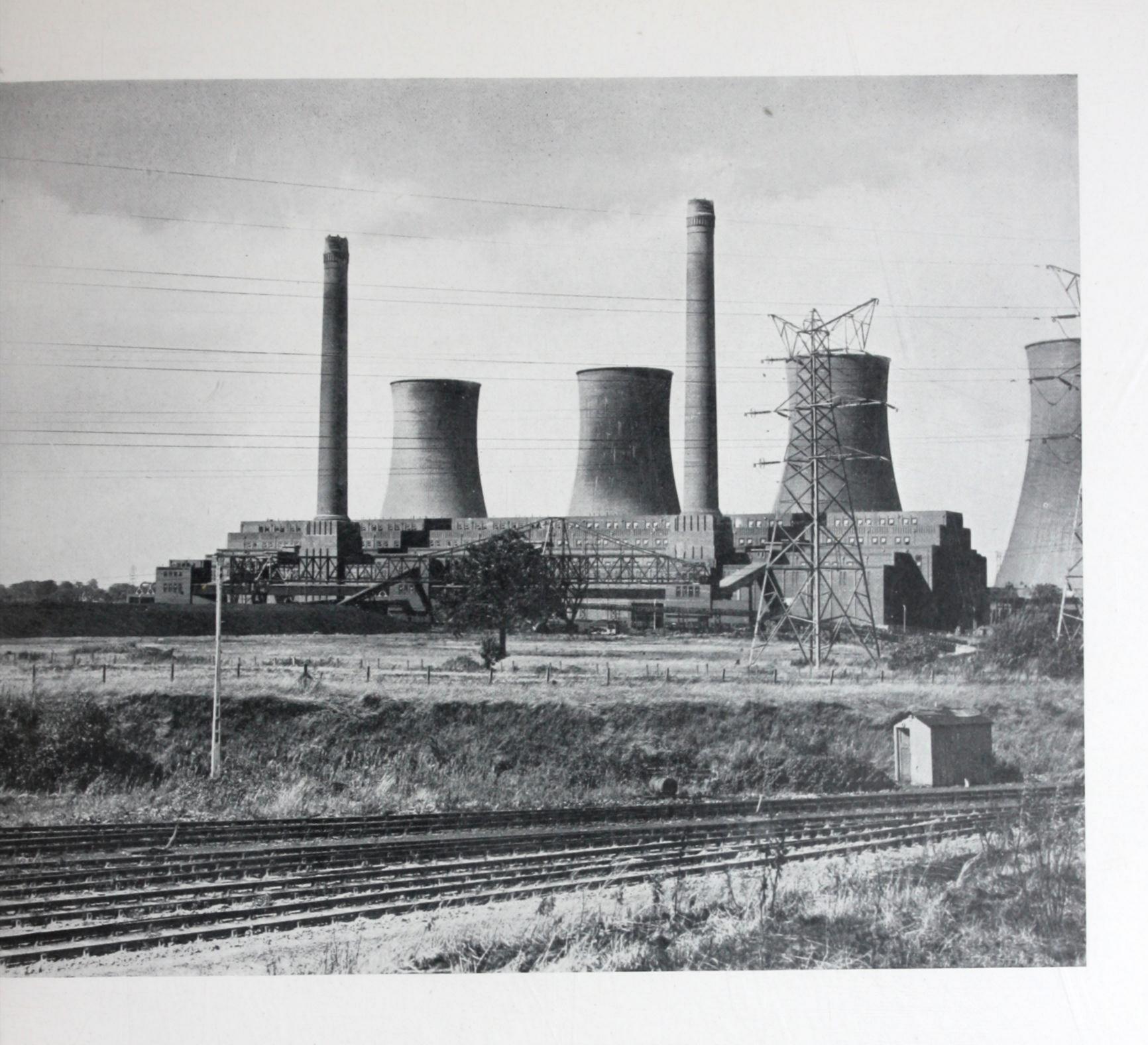
During construction.

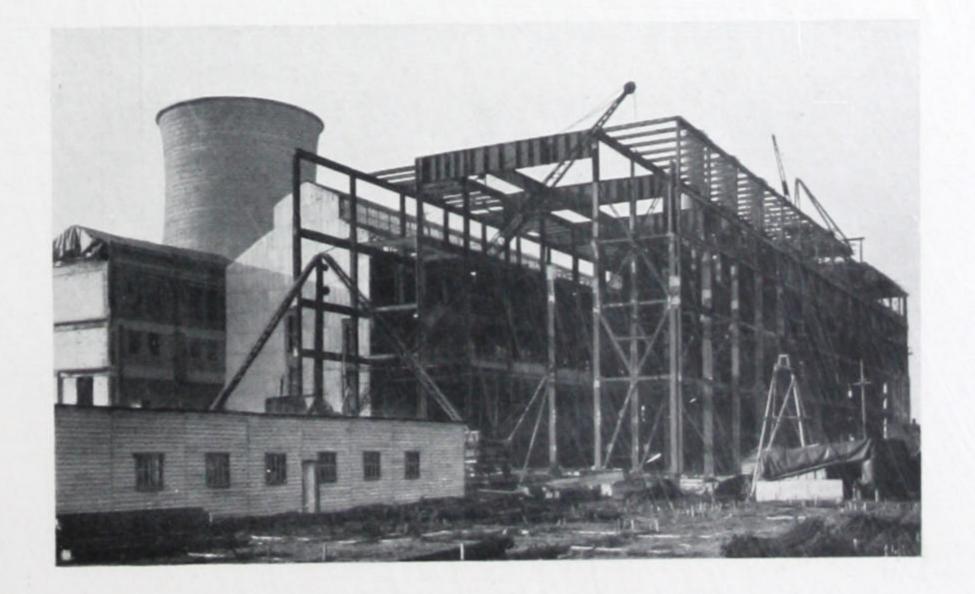


95. BRIDGE OVER RIVER SEVERN ON APPROACH ROAD TO THE POWER STATION



96. ELECTRICITY POWER STATIONS A AND B—HAMS HALL, ENGLAND For Birmingham Corporation. 8,000 tons of steelwork supplied and erected for Station A.





97. HAMS HALL POWER STATION A

During construction



98. STEEL MAKING PLANT—KARABUK, TURKEY

One million cubic yards of soil removed, II miles of railway sidings laid and many thousands of tons of steelwork supplied and erected.



99. STEEL MAKING PLANT, KARABUK Native labourers at work.



100. MOUNT ISA MINES—QUEENSLAND, AUSTRALIA 4,000 tons of steelwork supplied and erected.

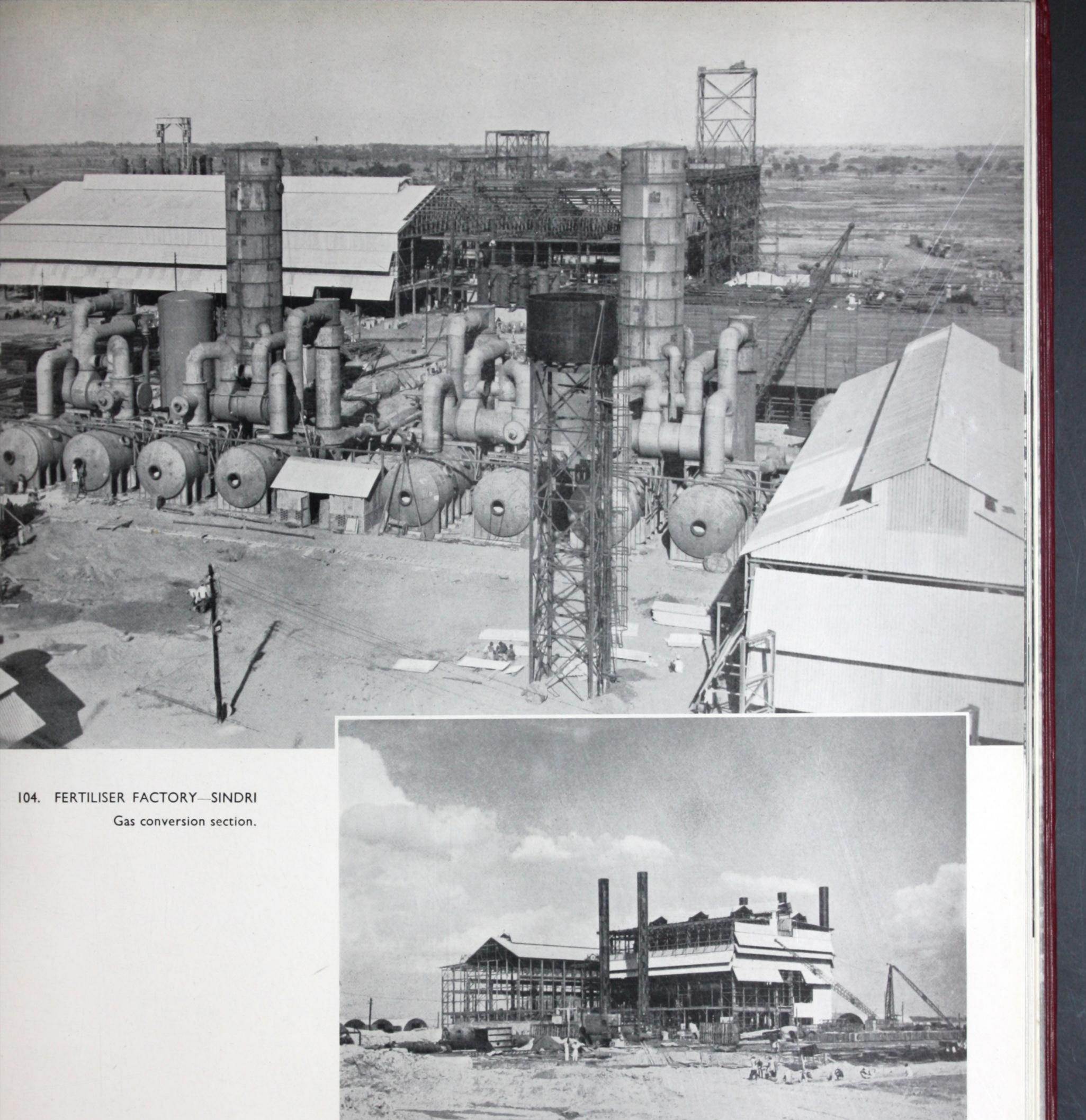


101. Mount Isa Mine when first discovered.



All Steelwork supplied and erected by the Braithwaite, Burn & Jessop Construction Co. Ltd.

103. FERTILISER FACTORY—SINDRI Scrubbers.

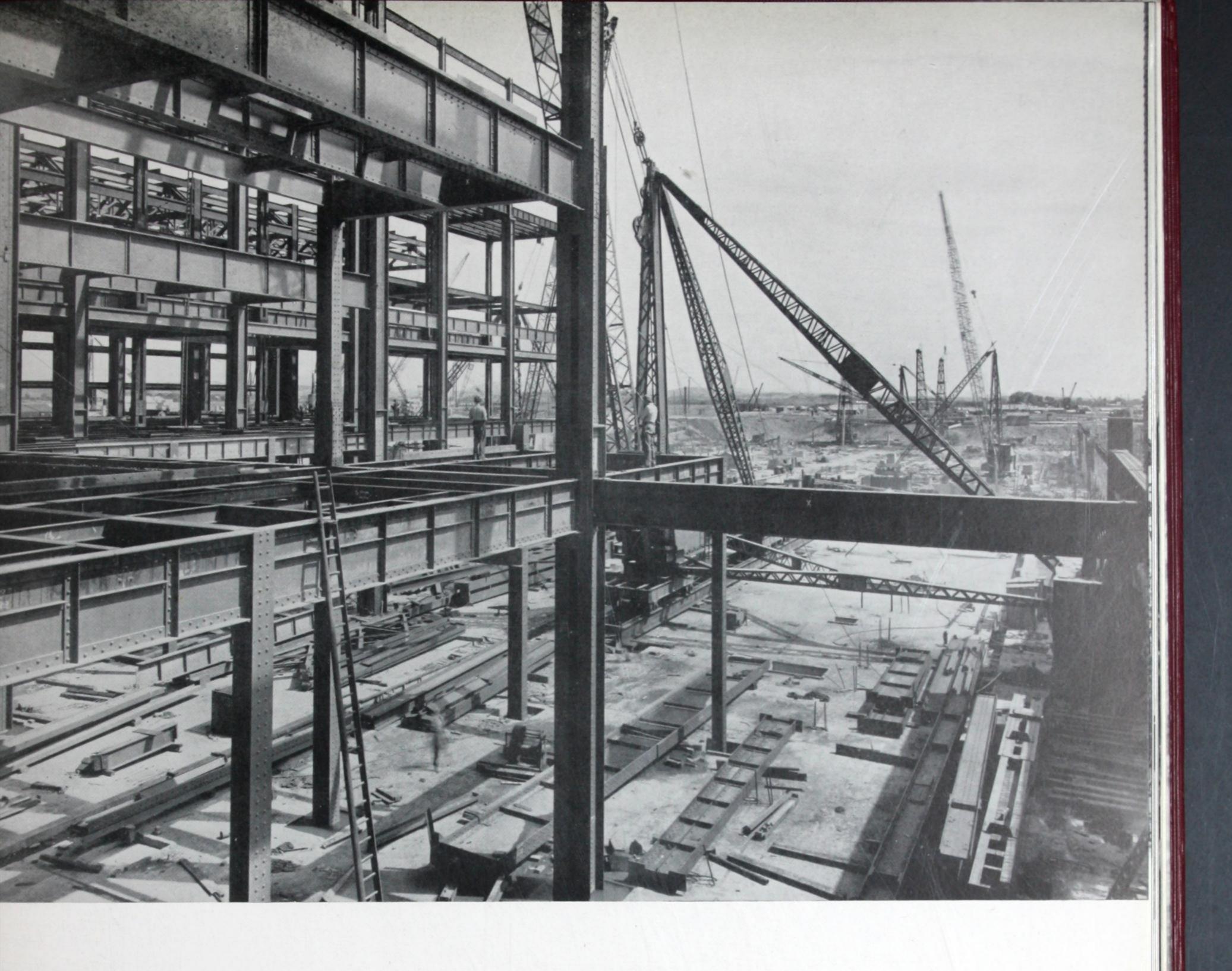


105. FERTILISER FACTORY—SINDRI,
Ammonia plant building during construction.

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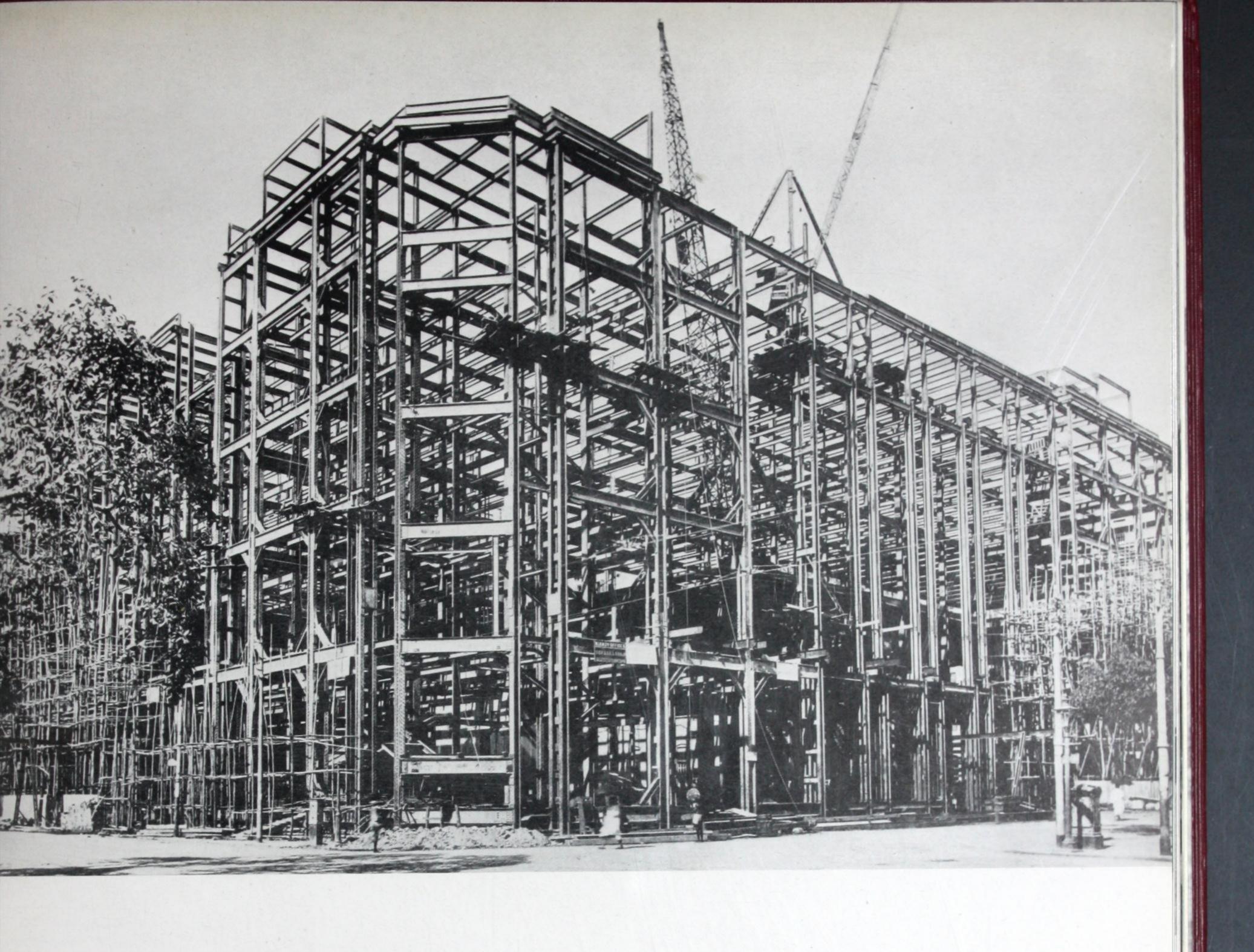
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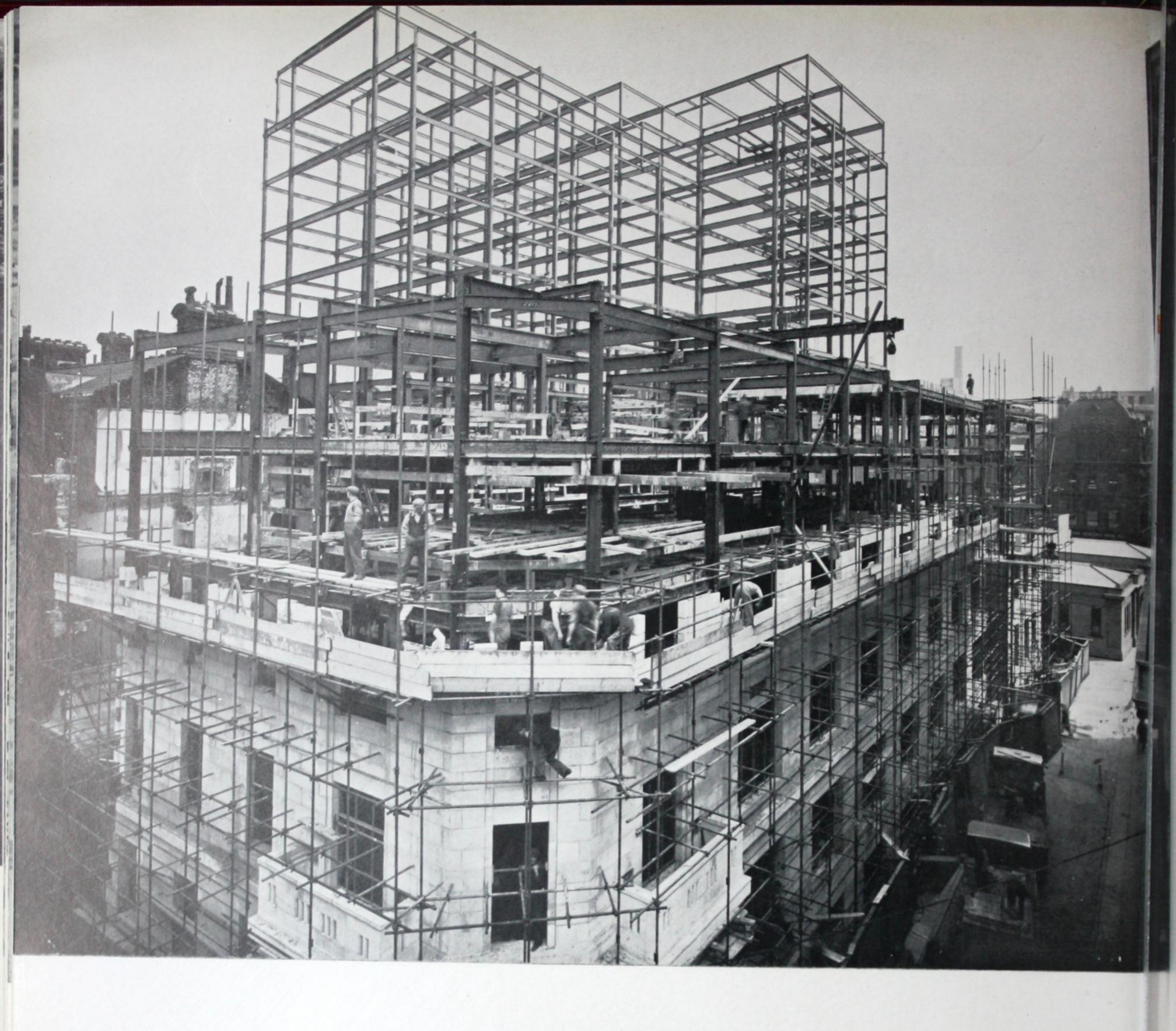
STEEL FRAMED STRUCTURES



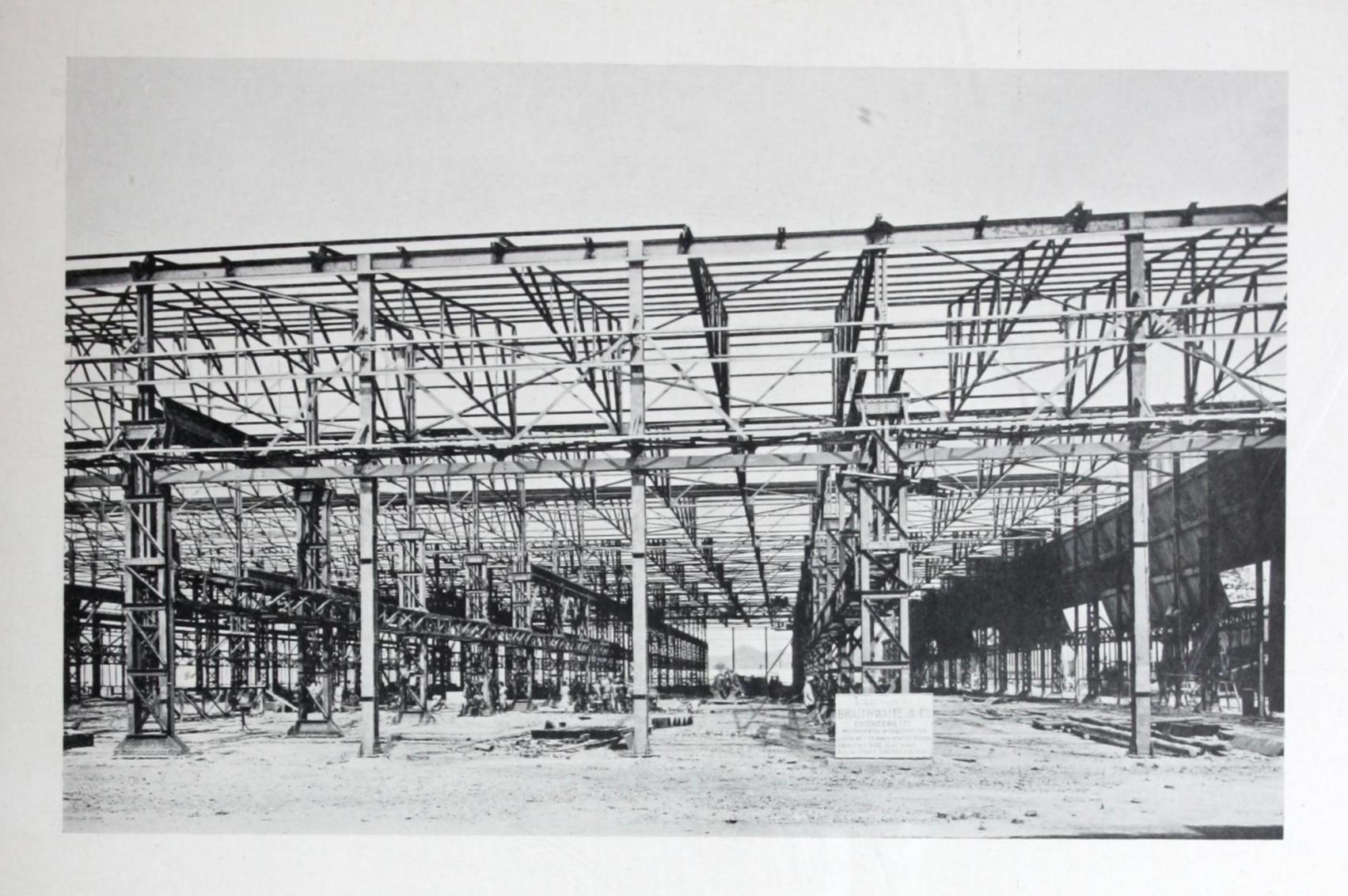
106. STEEL FRAMED BUILDING—SHANGHAI
For the Compagnie Française de Tramways et d'Eclairage Electrique de Shanghai.

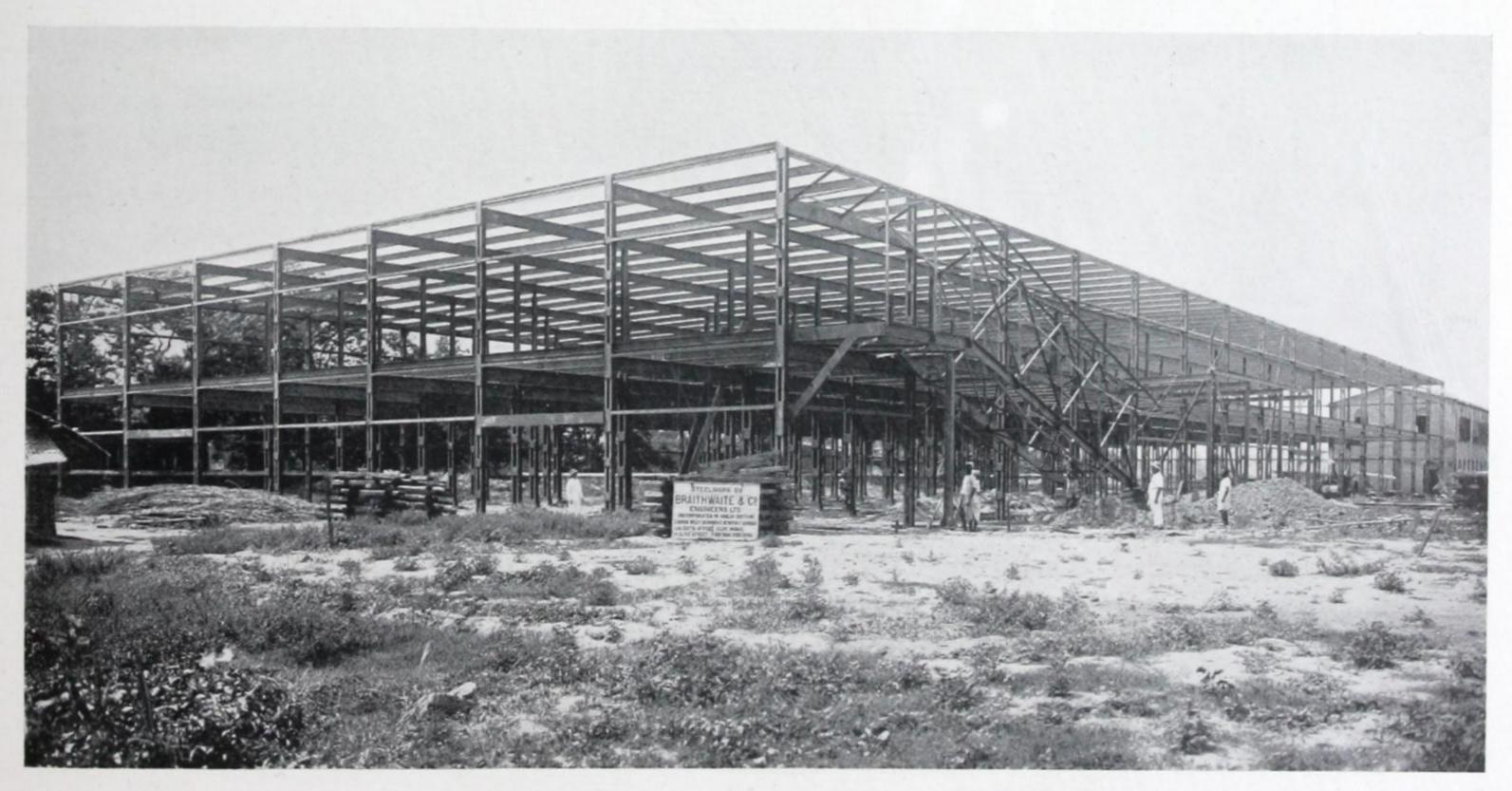


107. STEEL FRAMED OFFICE BUILDING-CALCUTTA, INDIA

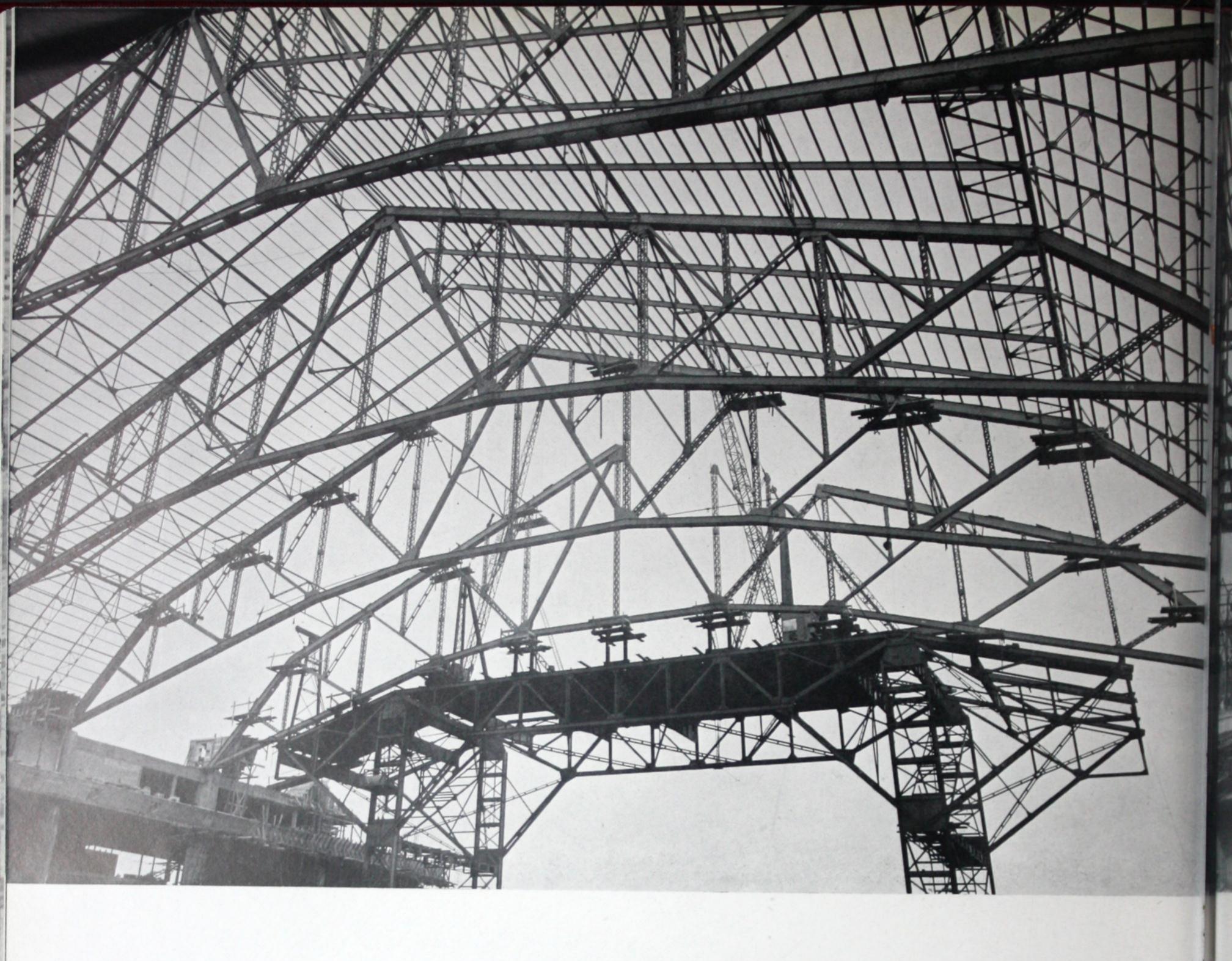


108. THE EXCHANGE BUILDING—LIVERPOOL, ENGLAND 4,000 tons of steelwork supplied and erected.





109. STEEL FRAMED FACTORY BUILDINGS—CALCUTTA, INDIA



110. ROOF OVER EXHIBITION HALL, EARLS COURT, LONDON, ENGLAND 165 feet above floor level, with a clear span of 250 feet.





112. OMNIBUS GARAGE—PERRY BAR, BIRMINGHAM, ENGLAND



113. OMNIBUS GARAGE—NEWPORT, MON., ENGLAND



114. AEROPLANE HANGAR-PORTSMOUTH, ENGLAND

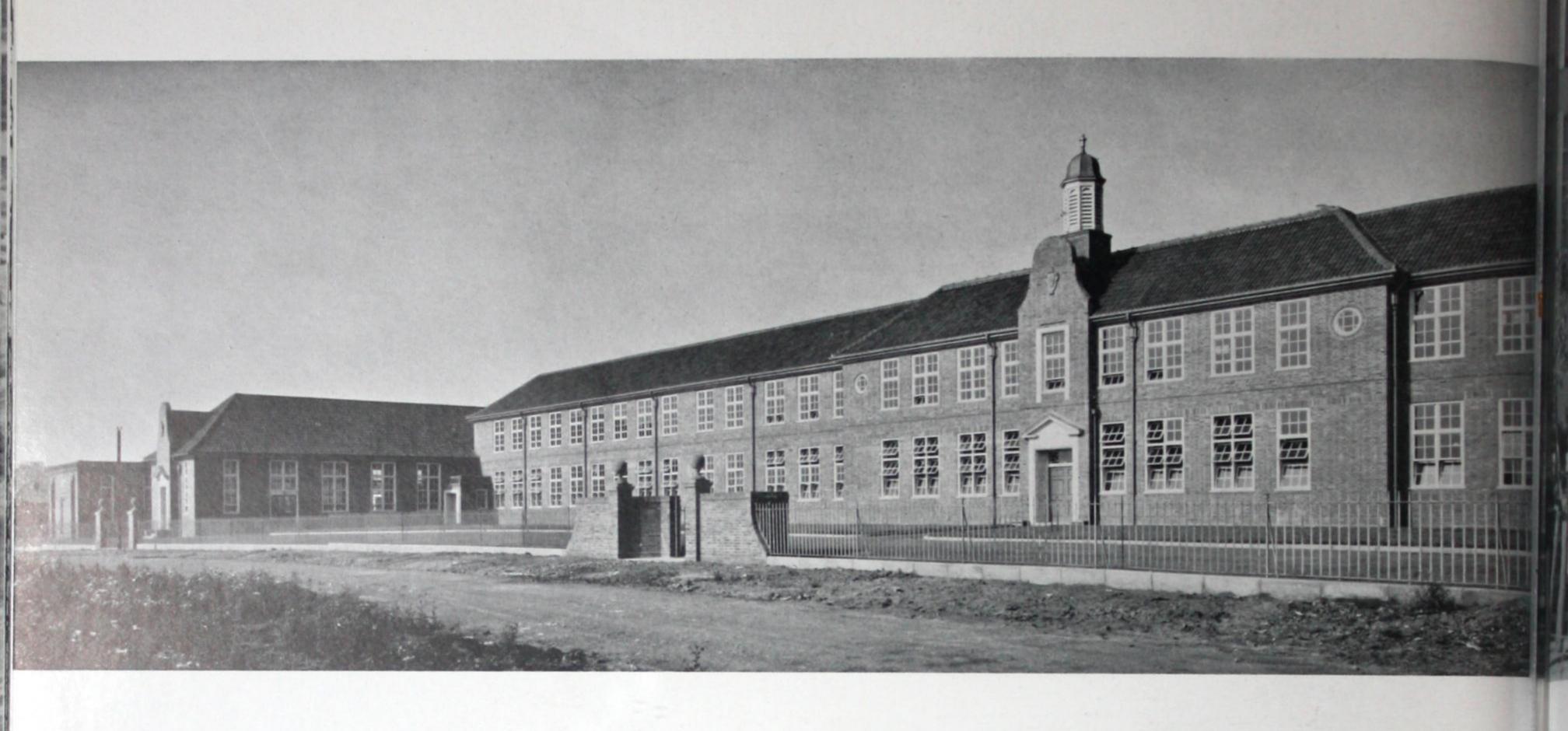


115. RAILWAY STATION-NEWPORT, MON.





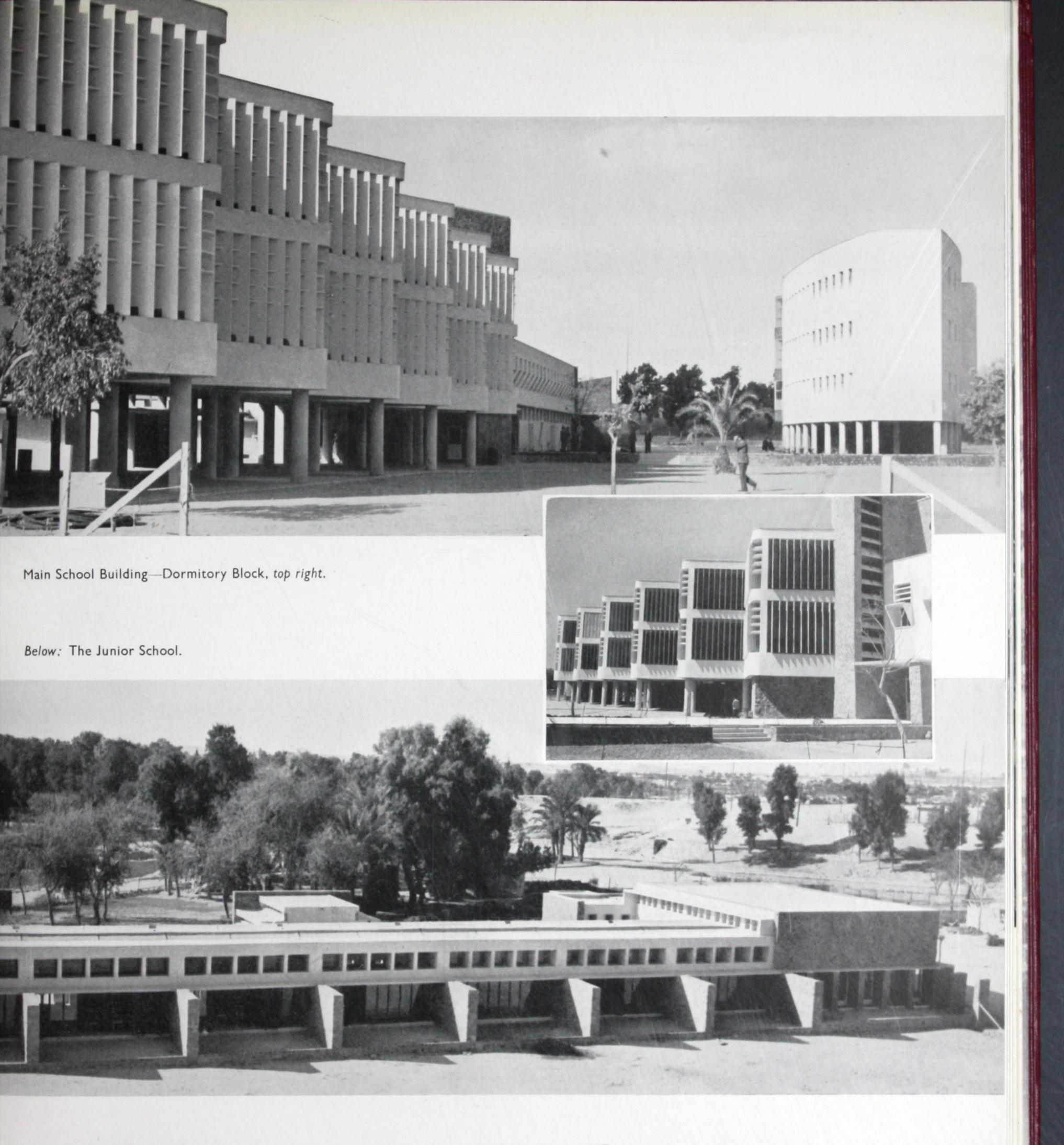
118. STEEL FRAMED BUILDING—SLOANE STREET, LONDON, ENGLAND Flats and shop premises.



119. STEEL FRAMED BUILDING—BIRMINGHAM, ENGLAND School for the local Educational Authorities.



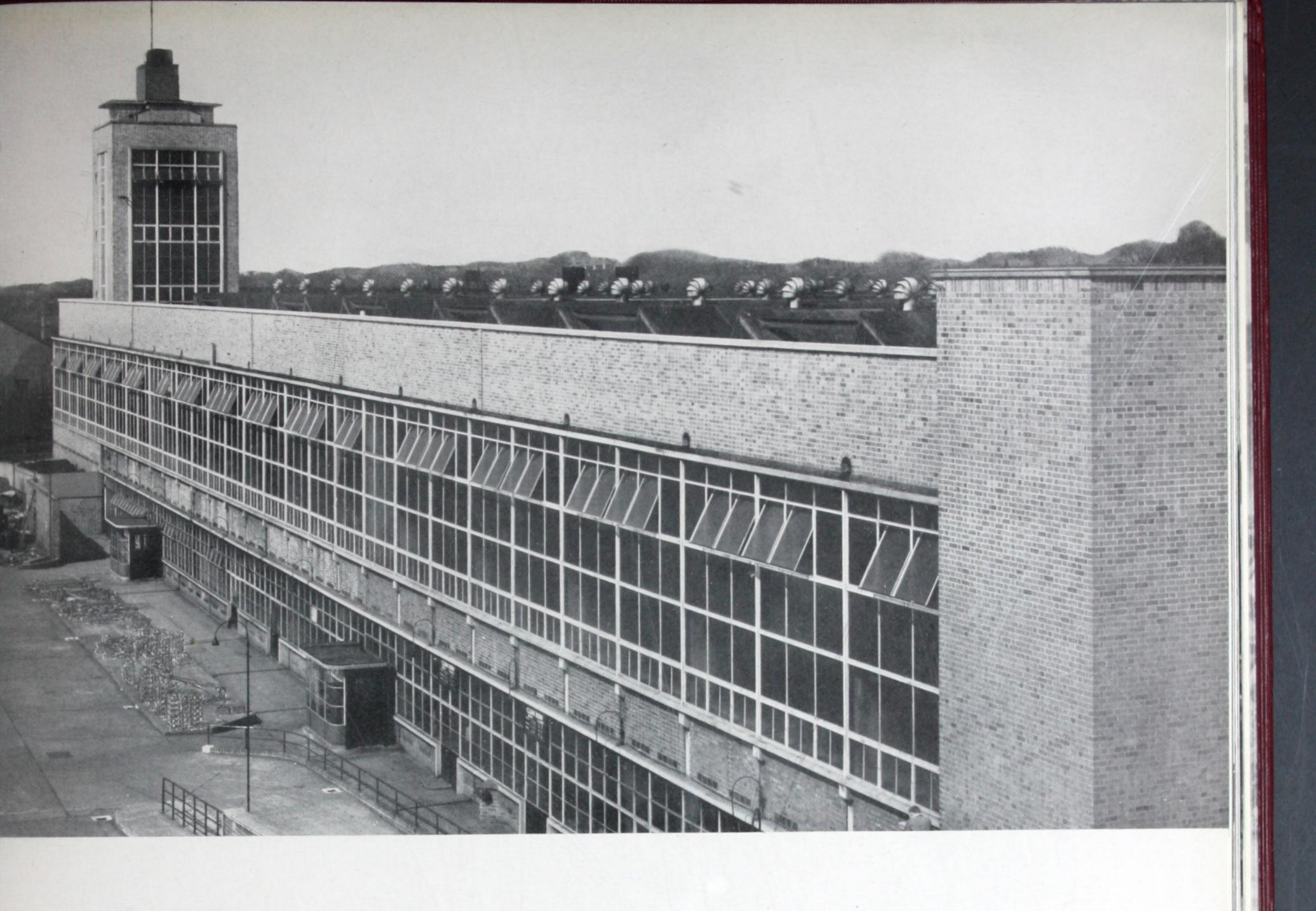
120. STEEL FRAMED BUILDING—DORSET, ENGLAND
Offices for the Municipality of Poole.



121. VICTORIA COLLEGE—CAIRO, EGYPT In reinforced concrete.



122. STEEL FRAMED BUILDING—BIRMINGHAM, ENGLAND Messrs. Cadbury Brothers Limited, Bournville.



123. STEEL FRAMED FACTORY BUILDING—WOLVERHAMPTON, ENGLAND Henry Meadows, Ltd.



124. STEEL FRAMED OFFICE BUILDING-CALCUTTA, INDIA



125. STEEL FRAMED OFFICE BUILDING-CALCUTTA, INDIA



126. STEEL FRAMED OFFICE BUILDING—CALCUTTA, INDIA



127. CHOWBAYS BUILDING-CALCUTTA, INDIA



128. "THE STATESMAN" BUILDING—CALCUTTA, INDIA



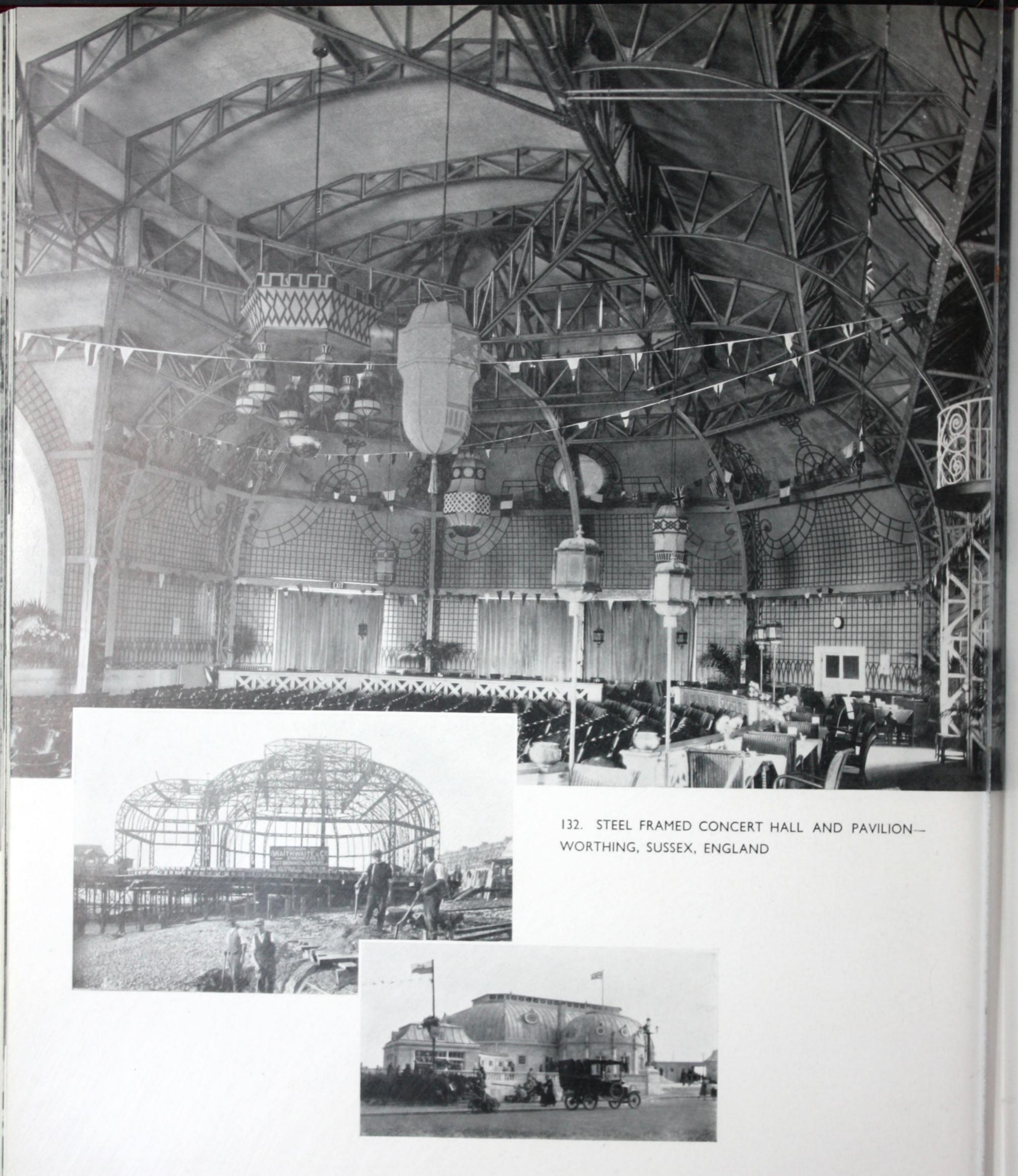
129. QUTB MINAR TEMPLE—BARODA, INDIA

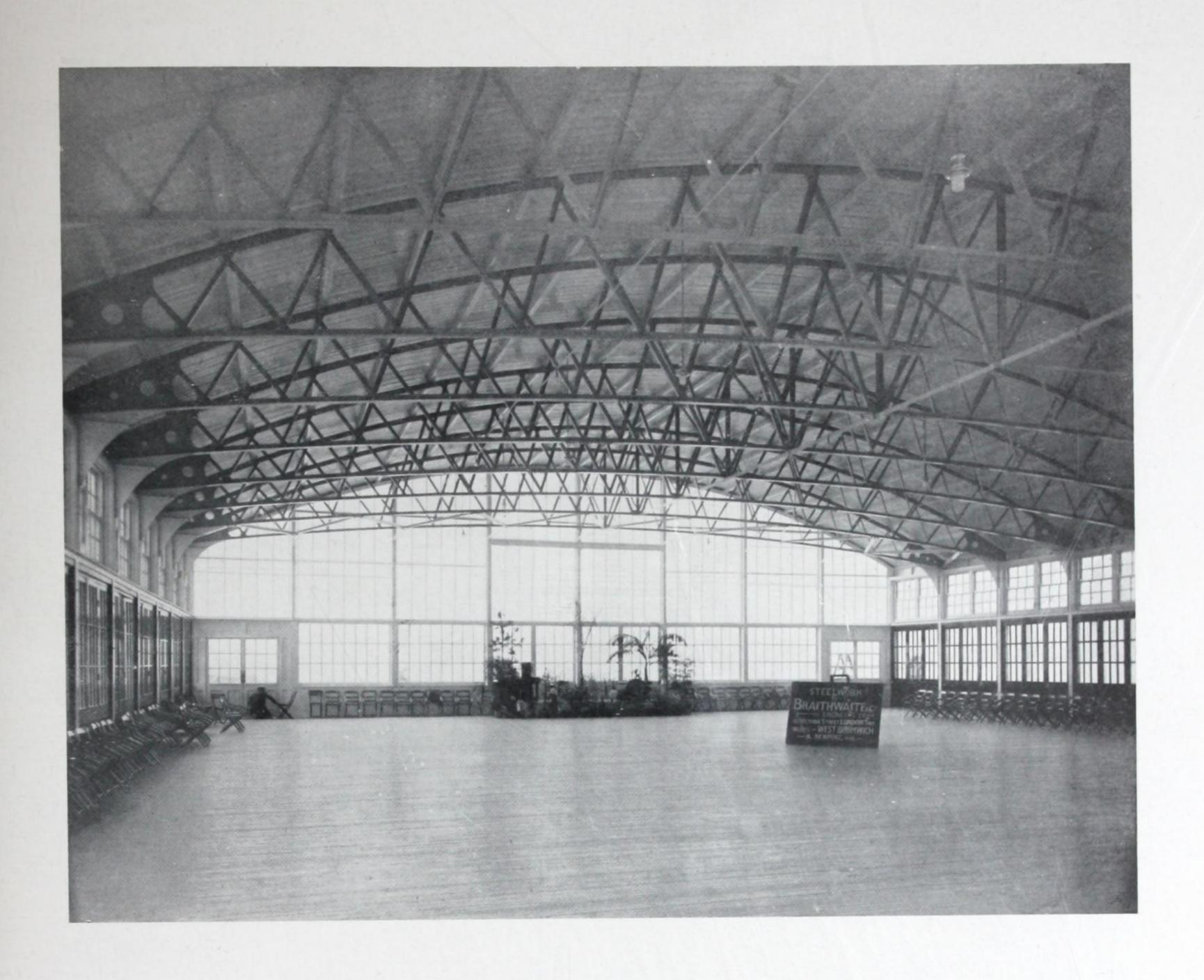


130. ADELPHI CINEMA—SLOUGH, ENGLAND



131. PICCADILLY THEATRE—BIRMINGHAM, ENGLAND





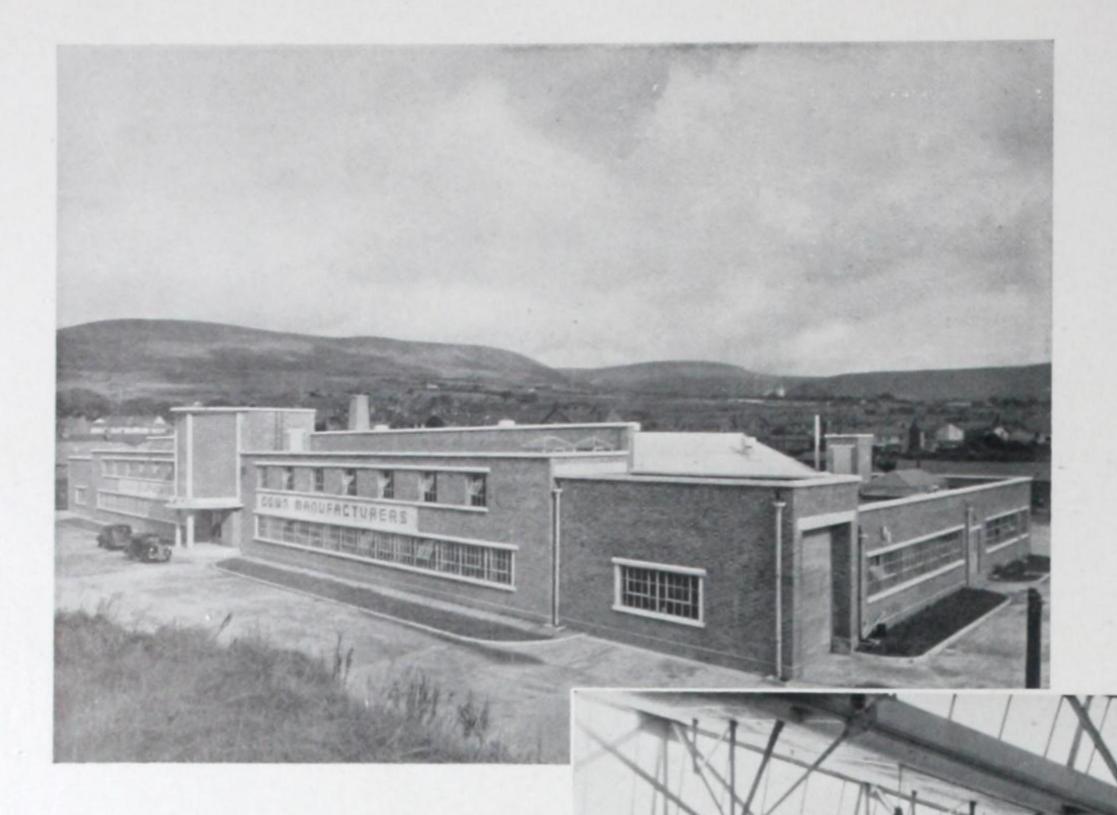
133. STEEL FRAMED DANCE HALL-HASTINGS, SUSSEX, ENGLAND



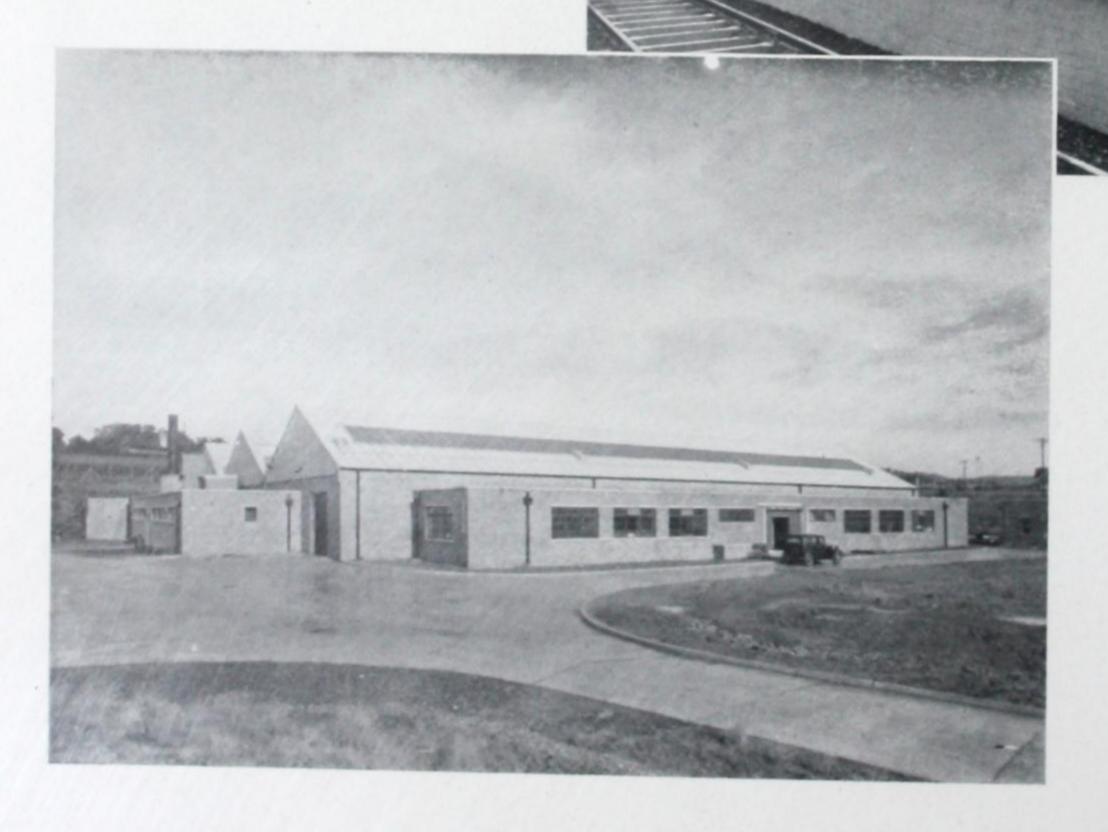
134. STEEL FRAMED FACTORY BUILDINGS OF SPECIAL DESIGN—TURKEY



135. STEEL FRAMED GRAND STAND FOR POLO GROUND-ROEHAMPTON, ENGLAND



136. STEEL FRAMED FACTORIES— SOUTH WALES



137. Two of a number of steel framed factories for a Trading Estate.



138. INTERIOR VIEW OF A FACTORY ON A TRADING ESTATE—SOUTH WALES

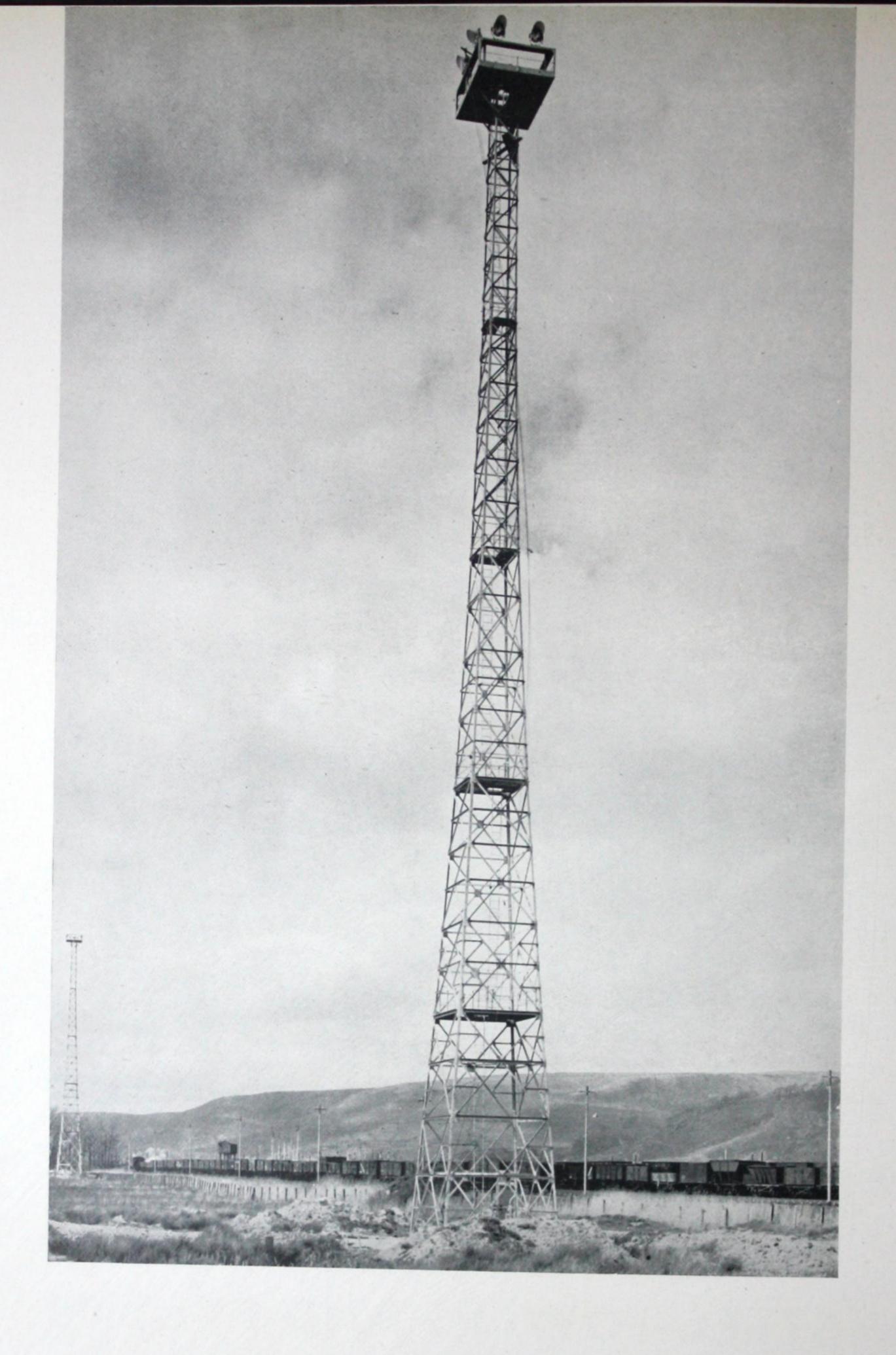
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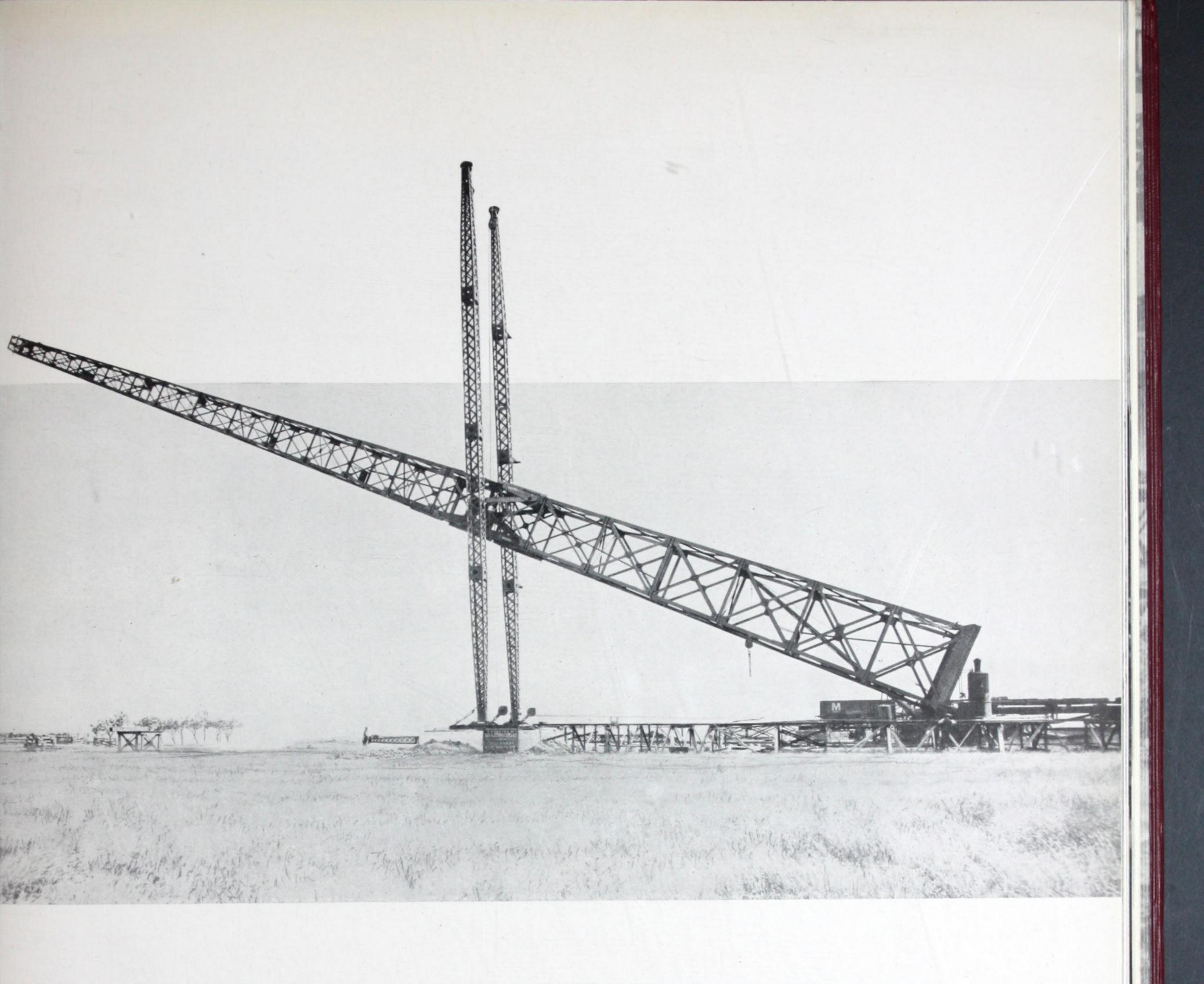
CCA



STEEL TOWERS AND PYLONS



139. FLOOD LIGHTING TOWERS—RAILWAY MARSHALLING YARDS
OF THE STEEL COMPANY OF WALES, MARGAM, S. WALES



140. VELOCITY TOWERS
One of a series of steel towers for the British War Office during erection.
165 feet high and weighing 64 tons.

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WELDED STRUCTURES



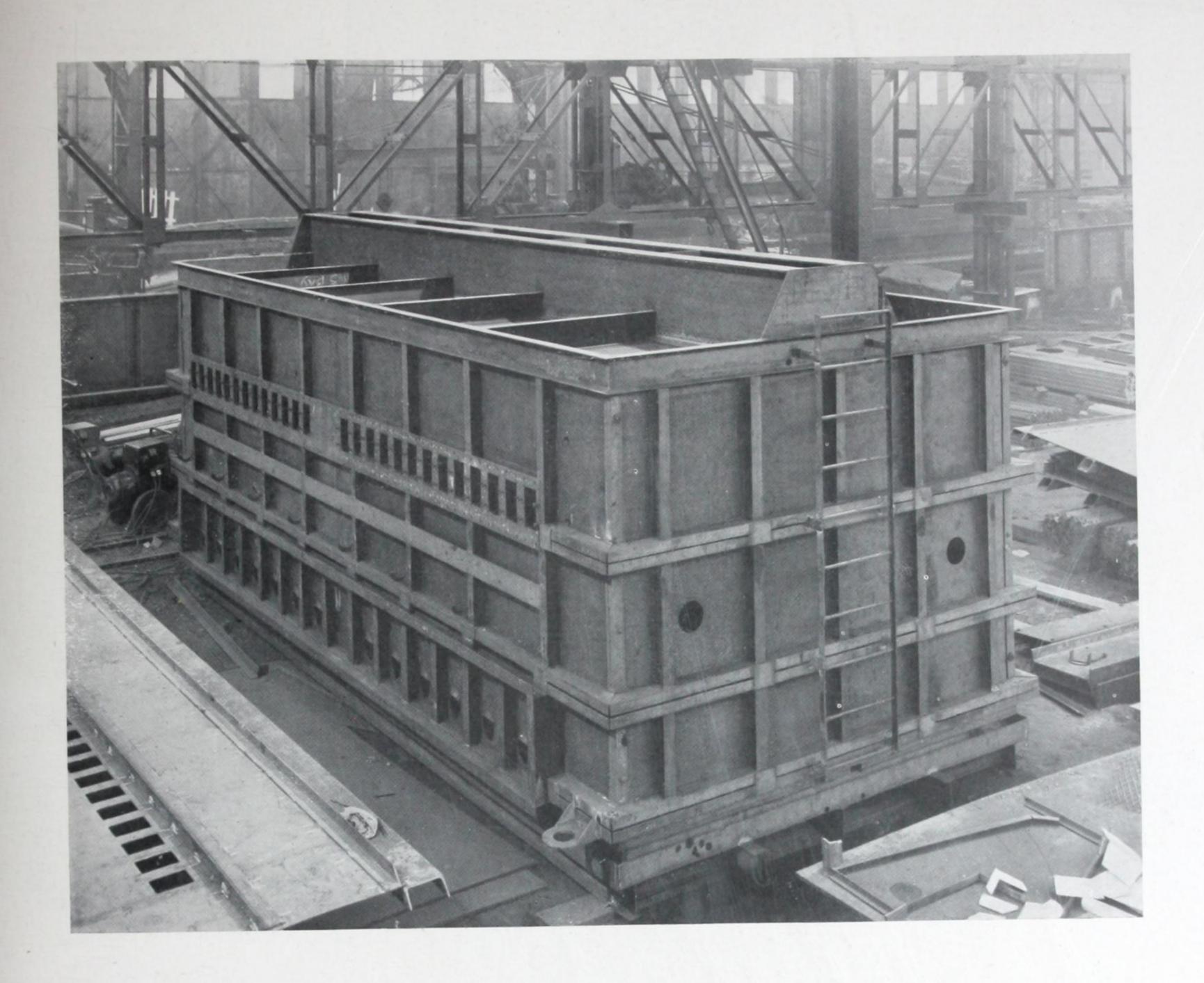
141 STEEL FRAMED FLATS—STREATHAM, LONDON, ENGLAND The first all-welded framework for a block of flats in England.



142. AN ALL-WELDED STEEL FRAMED PAVILION AND SOLARIUM— BEXHILL, SUSSEX, ENGLAND



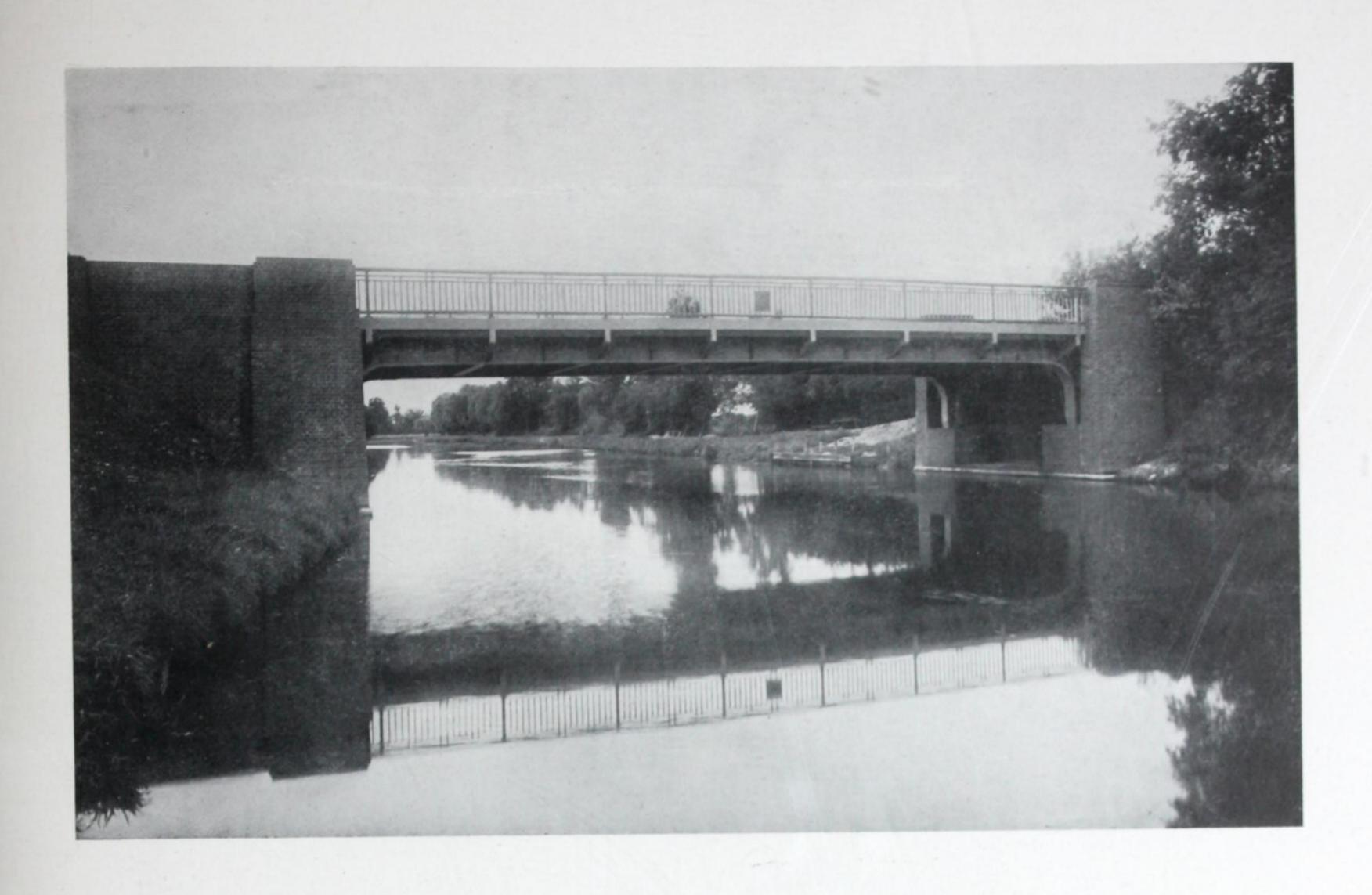
143. WELDED ROOF FRAMES, MAIN GIRDERS & STANCHIONS
FOR THE STEEL COMPANY OF WALES



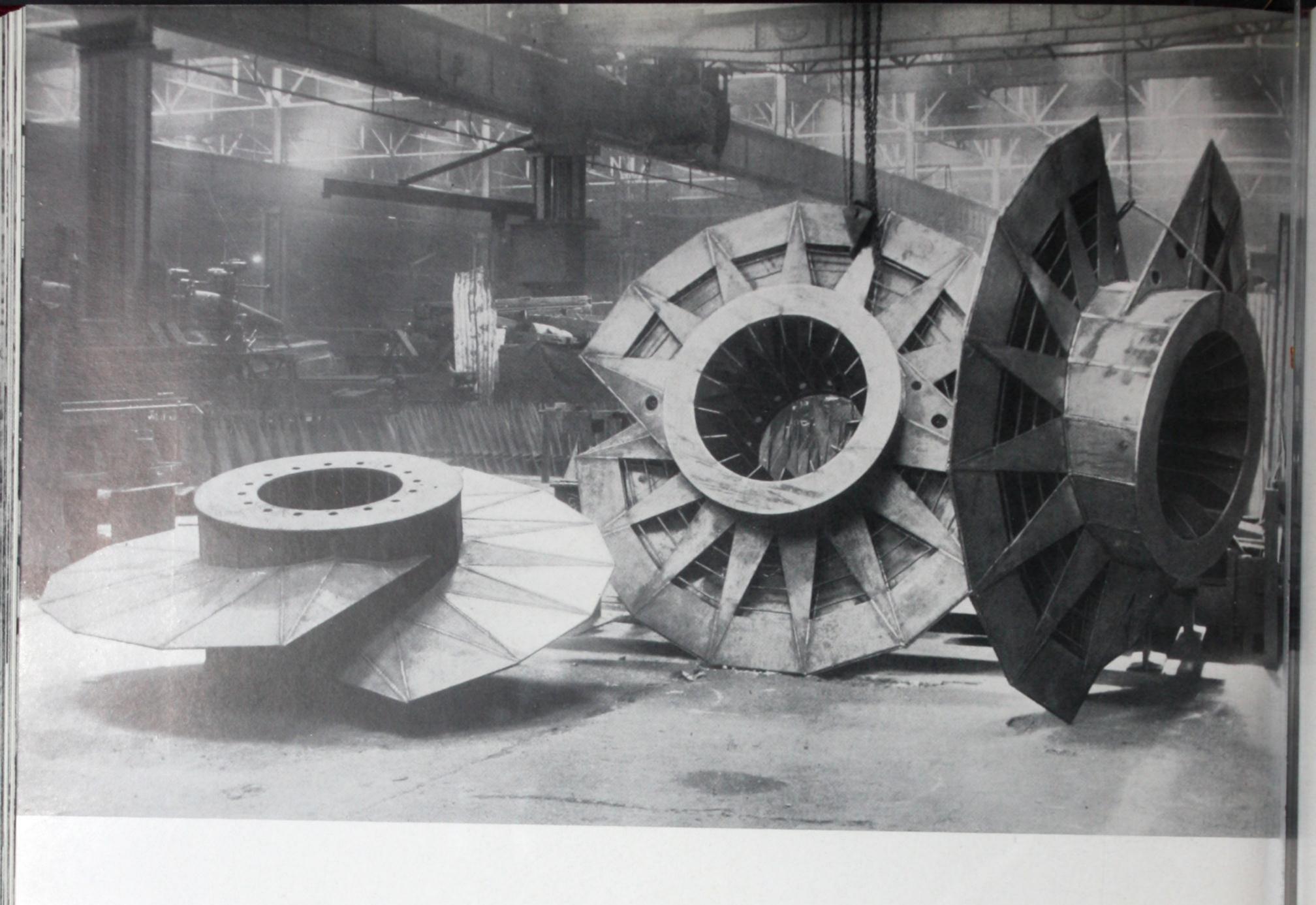
144. WELDED STEEL FURNACE CASING



145. WELDED SUPERSTRUCTURE—WESTON-SUPER-MARE, SOMERSET, ENGLAND



146. ROAD BRIDGE—CLAYHITHE, ESSEX, ENGLAND
The first all-welded steel road bridge in England.



147. BRIDGE FOUNDATIONS

Welded steel helices for use in conjunction with Screwcrete bridge or wharf foundations.



148. BRIDGE BEARINGS of welded construction



149. WELDED AIR DOME, Baghdad Bridge



150. HYDRAULIC PRESS FRAME
All-welded steel construction.





157. RAILWAY WAGONS

Examples of welded steel rolling stock built by Braithwaite & Co. (India) Limited.

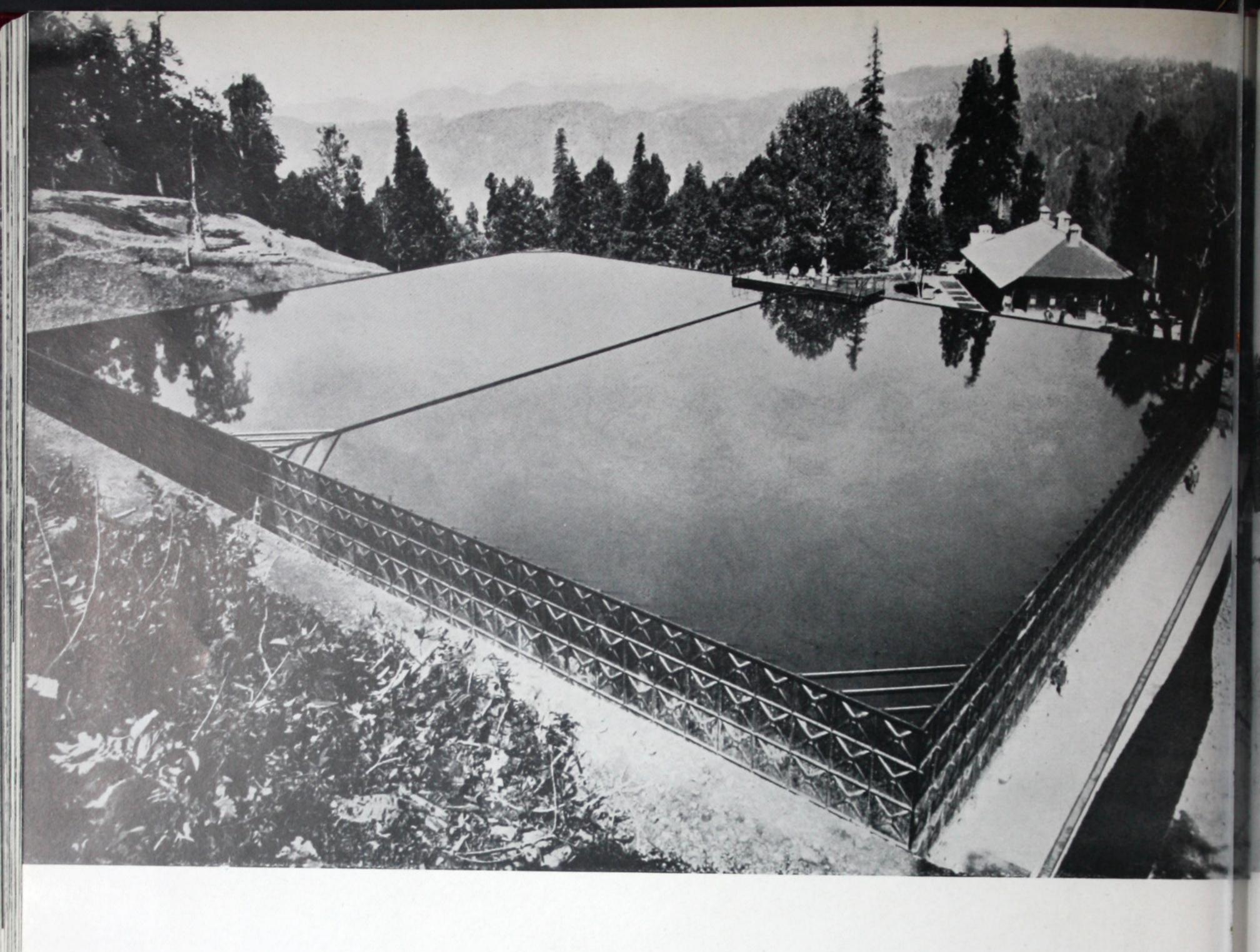
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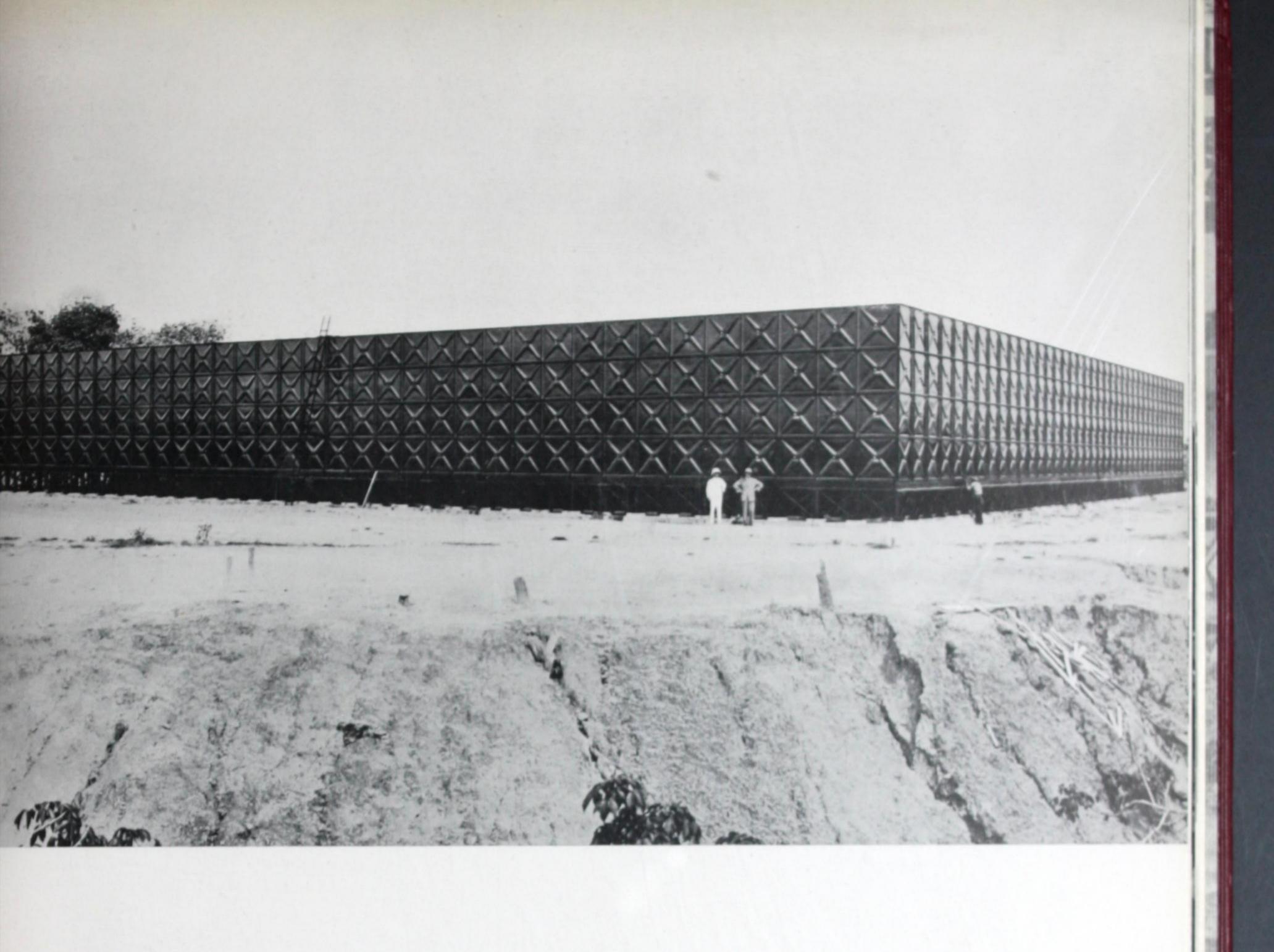
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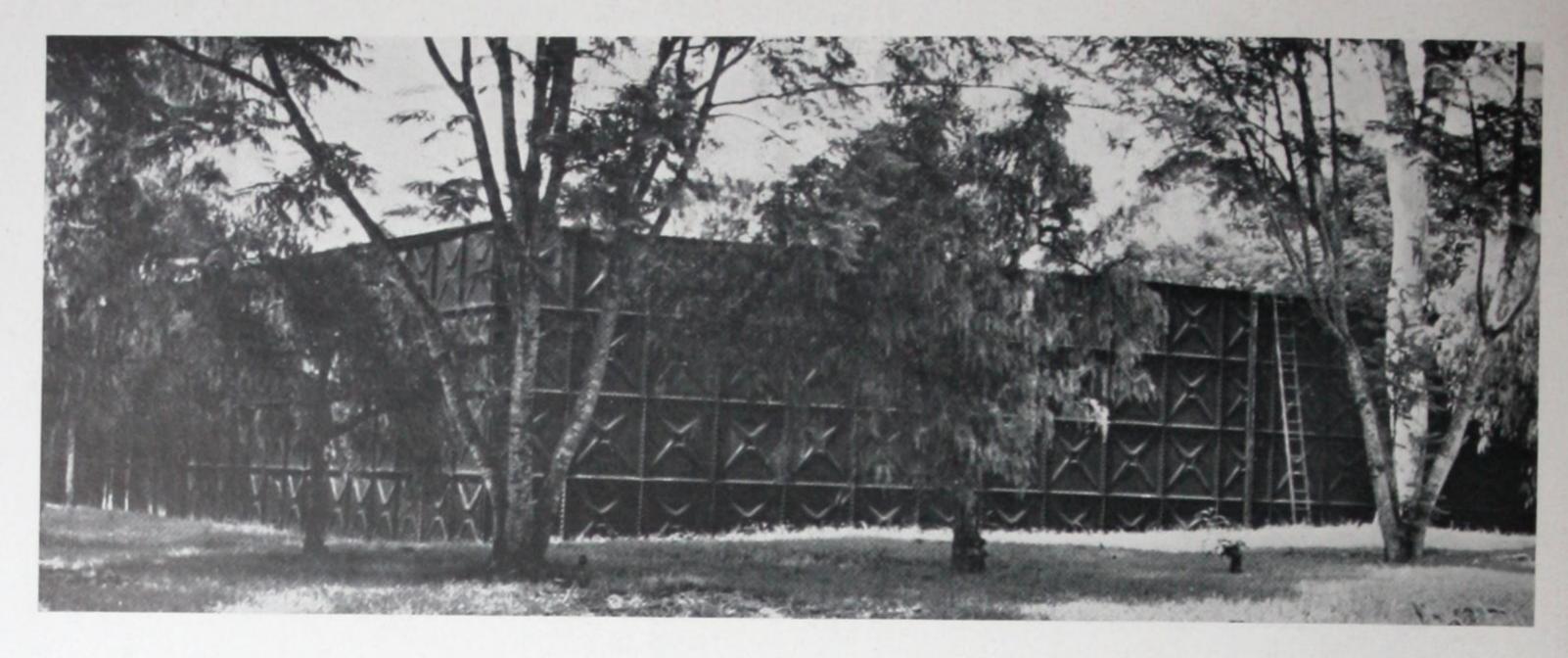
PRESSED STEEL TANKS



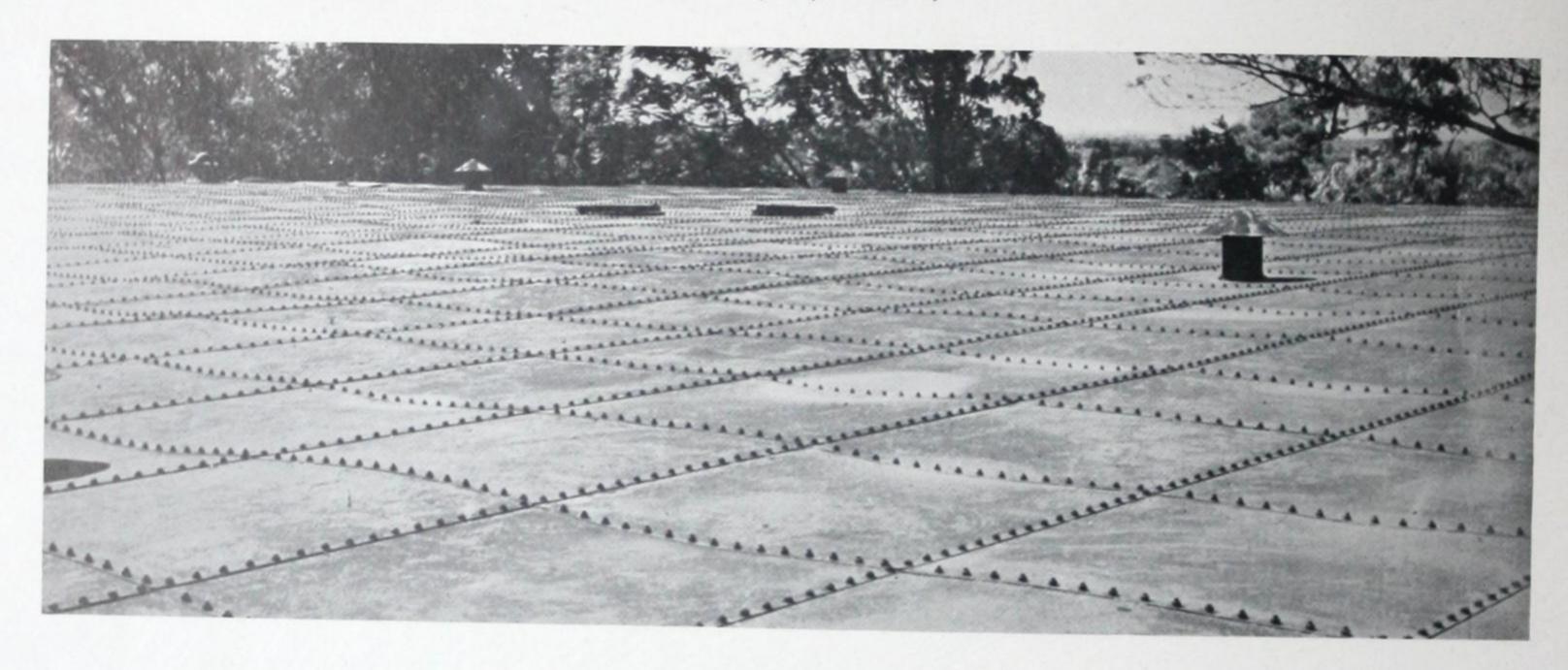
158. PRESSED STEEL TANK—MURREE, INDIA
The largest sectional tank in the world, 31 million gallons capacity.



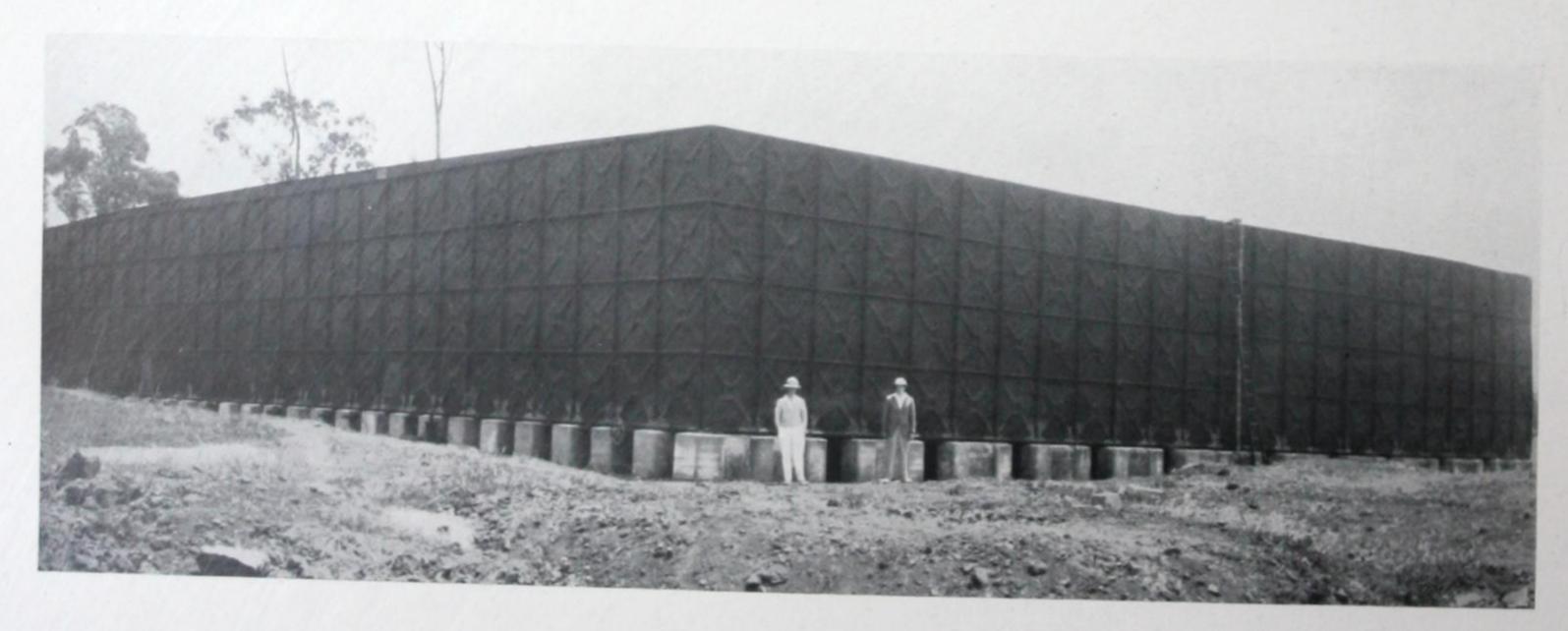
159. PRESSED STEEL TANK, KUCHING, SARAWAK
2½ million gallons capacity. A second tank is now in course of erection.



160. PRESSED STEEL TANK—NAIROBI, KENYA One million gallons capacity, after 25 years' service.

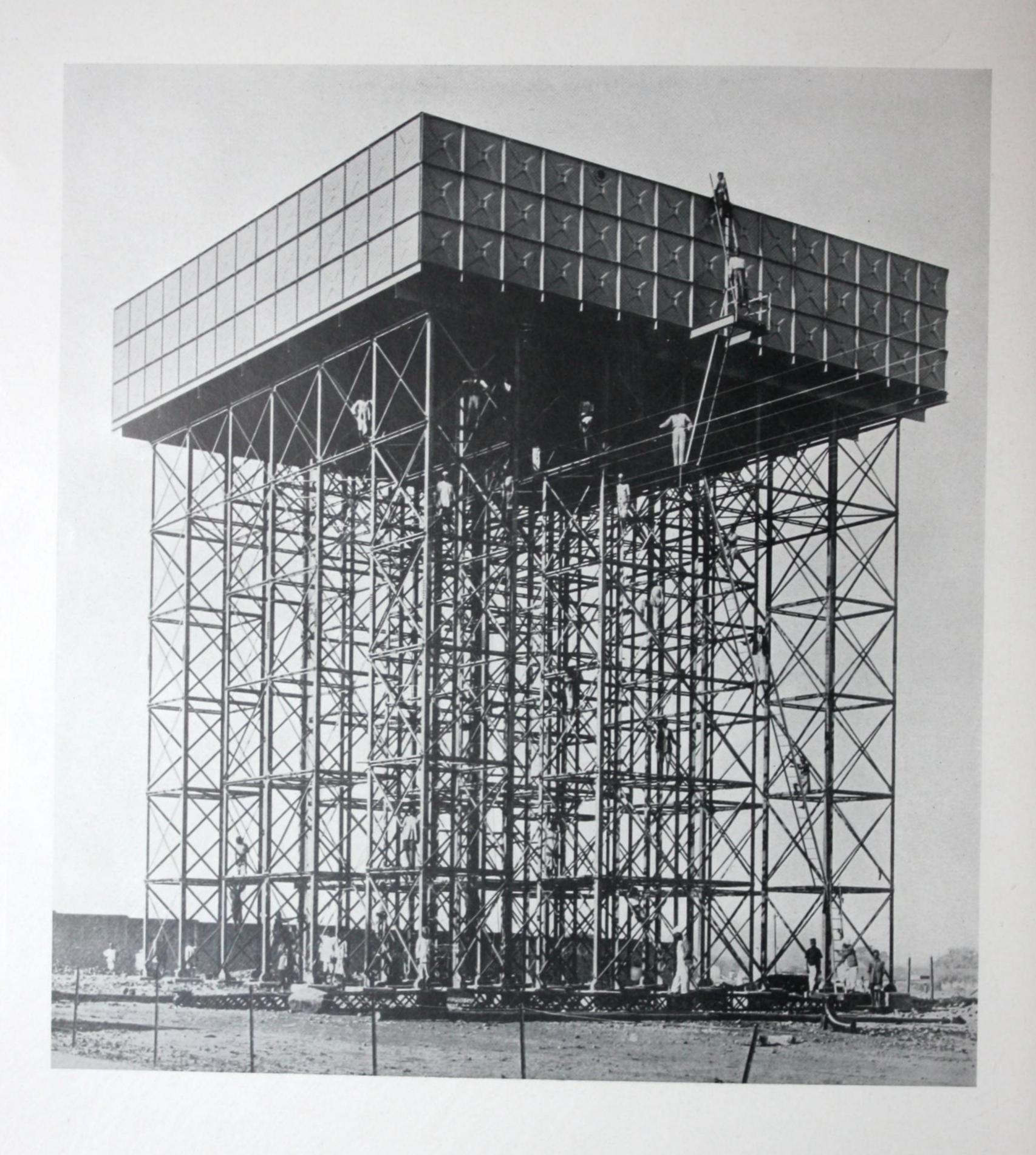


161. The cambered cover.

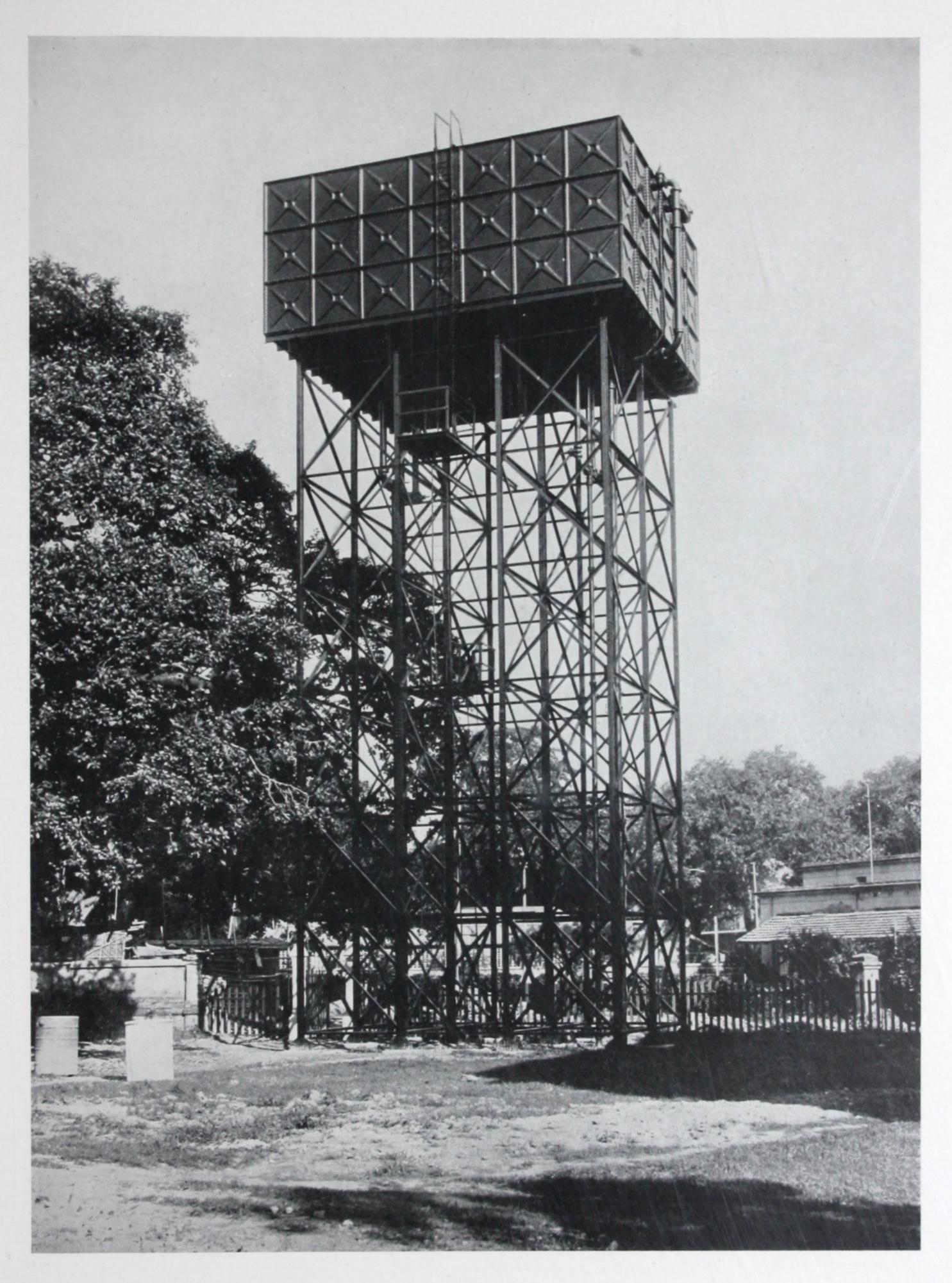


162. The Tank immediately after erection in 1925.





165. PRESSED STEEL TANK—KIRKEE, INDIA 264,000 gallons capacity, with supporting structure 60 feet high.



166. PRESSED STEEL TANK—HASTINGS, NEAR POONA, INDIA 48,700 gallons capacity, with supporting structure 60 feet high.



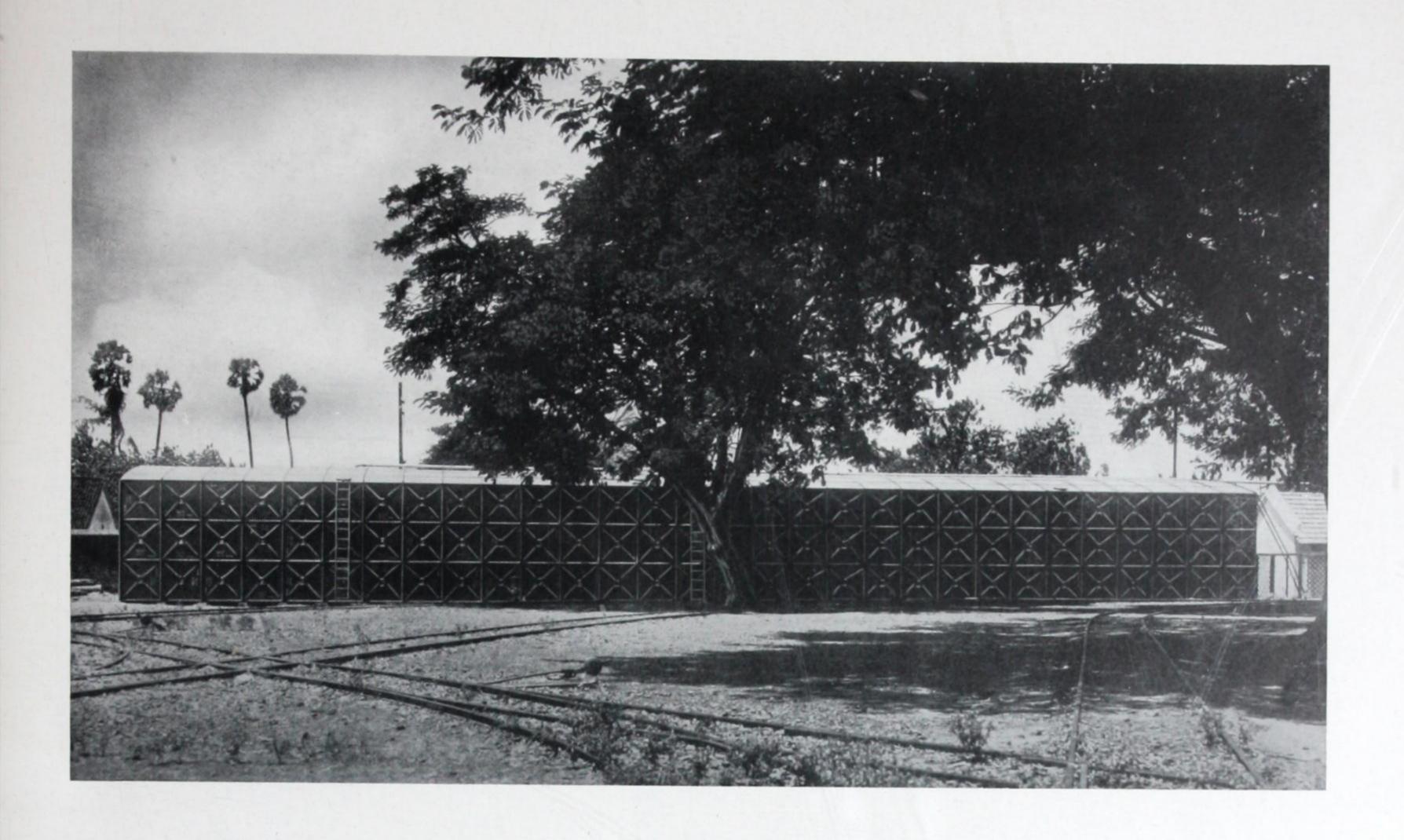
167. PRESSED STEEL TANKS AND SUPPORTING STRUCTURE 115 FEET HIGH—NEWPORT, MON., ENGLAND The capacity of the tanks are 26,950 and 2,950 gallons respectively.



168. PRESSED STEEL TANK—KARABUK, TURKEY 120,000 gallons capacity with supporting structure 100 feet high.



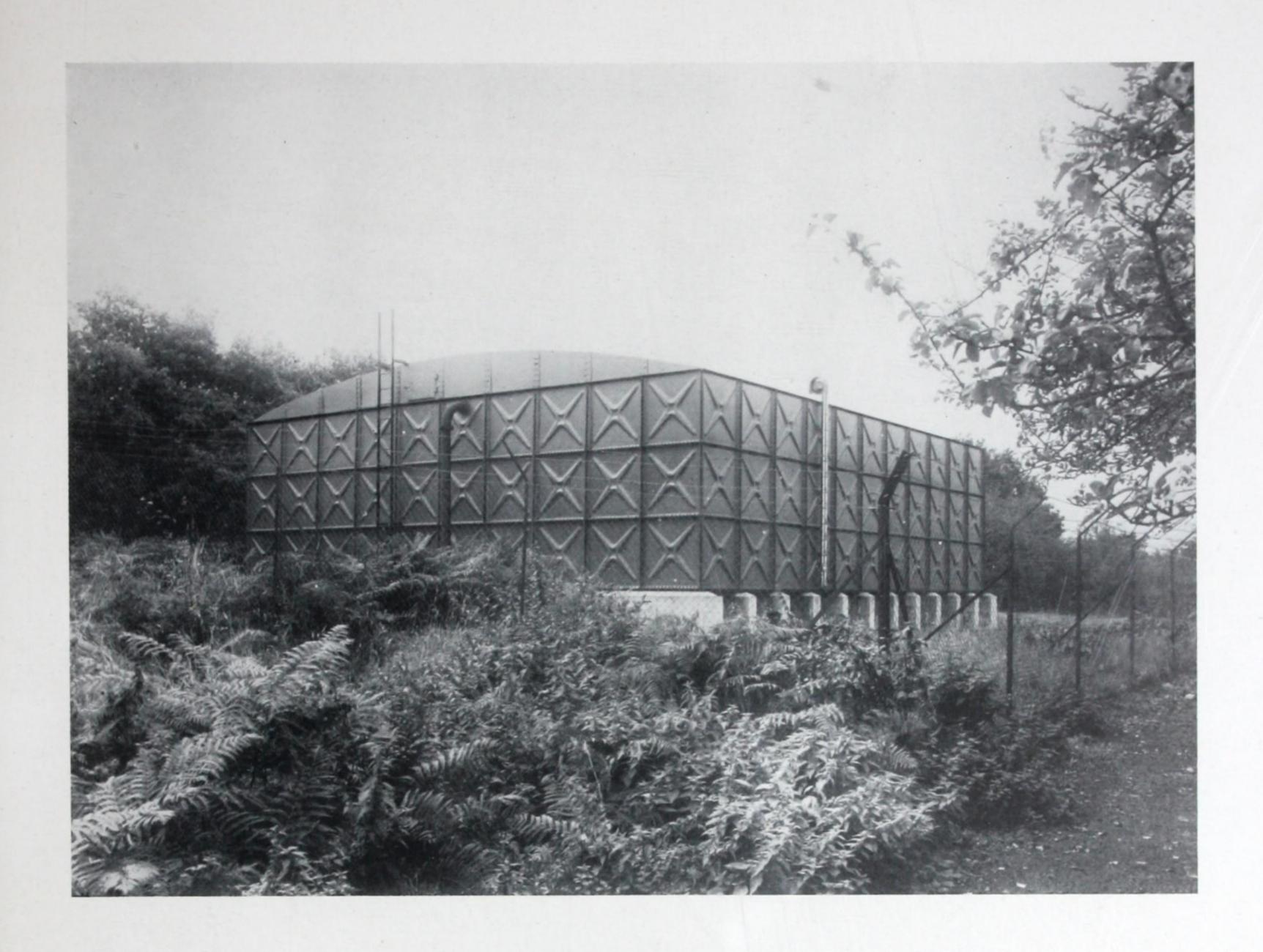
169. PRESSED STEEL TANK—TREFOREST, GLAMORGANSHIRE 24,000 gallons capacity, with supporting structure 60 feet high.



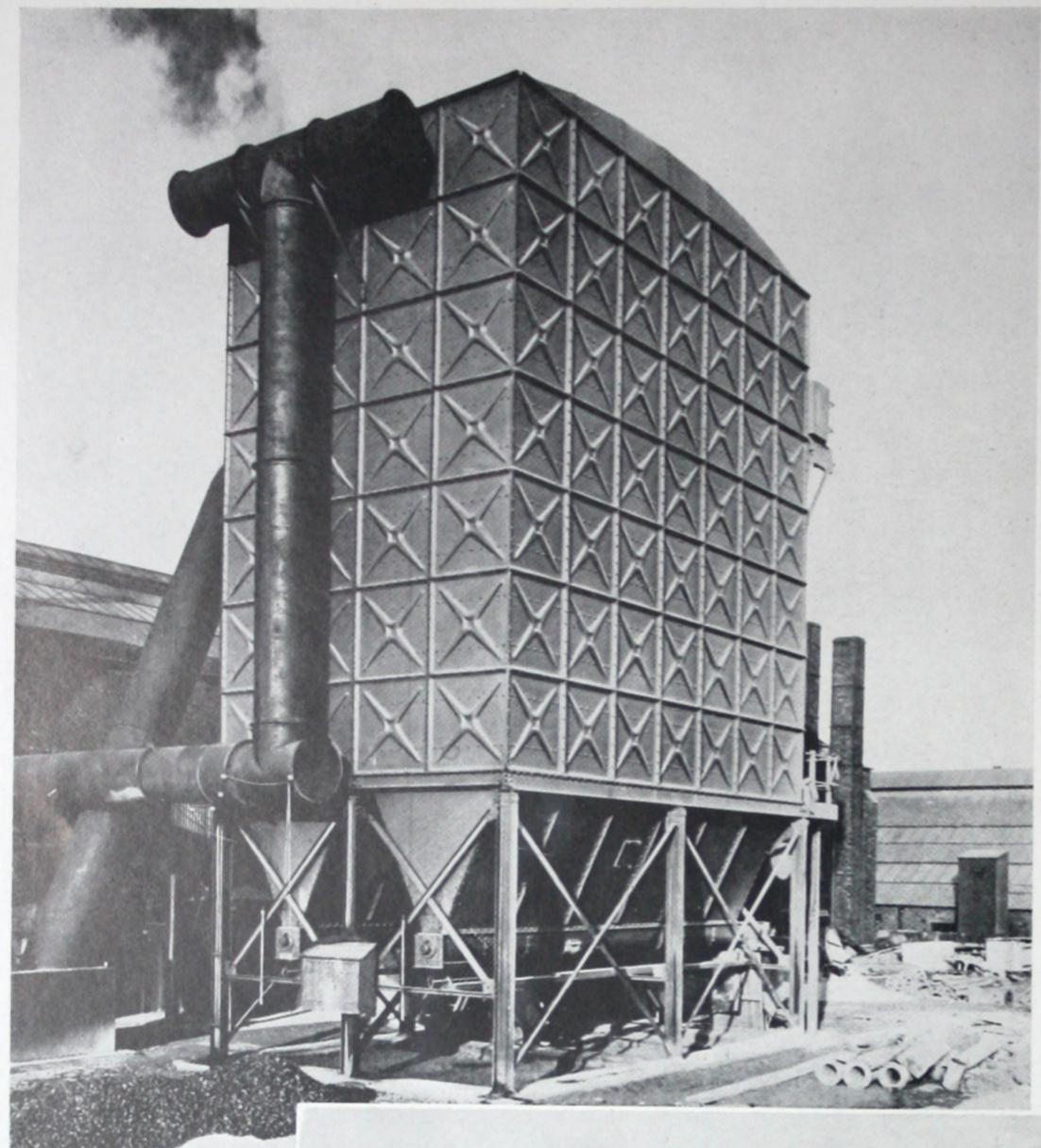
170. PRESSED STEEL TANK—MADRAS STATE, INDIA For the storage of molasses.



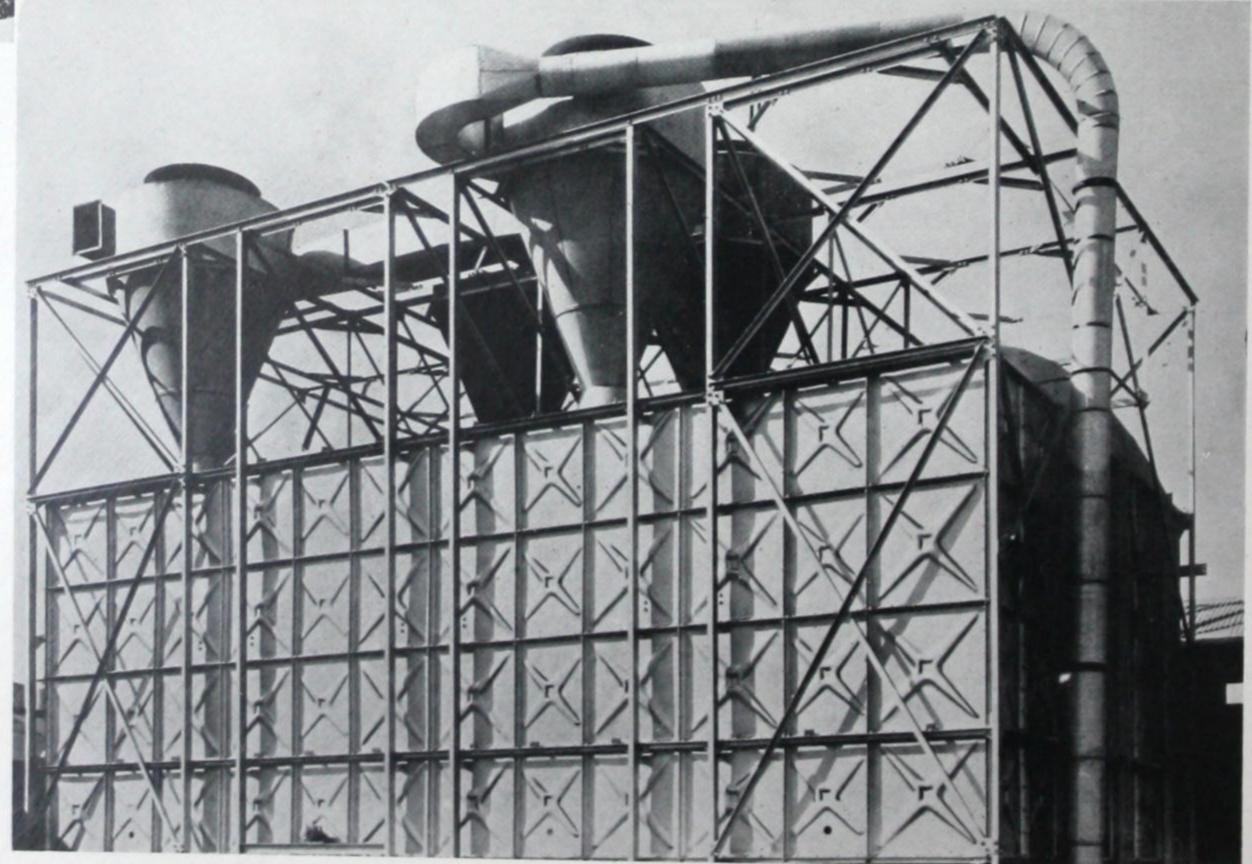
171. PRESSED STEEL TANK, 16,000 GALLONS CAPACITY
With supporting structure 54 feet high, for a rural water supply scheme in South Wales.



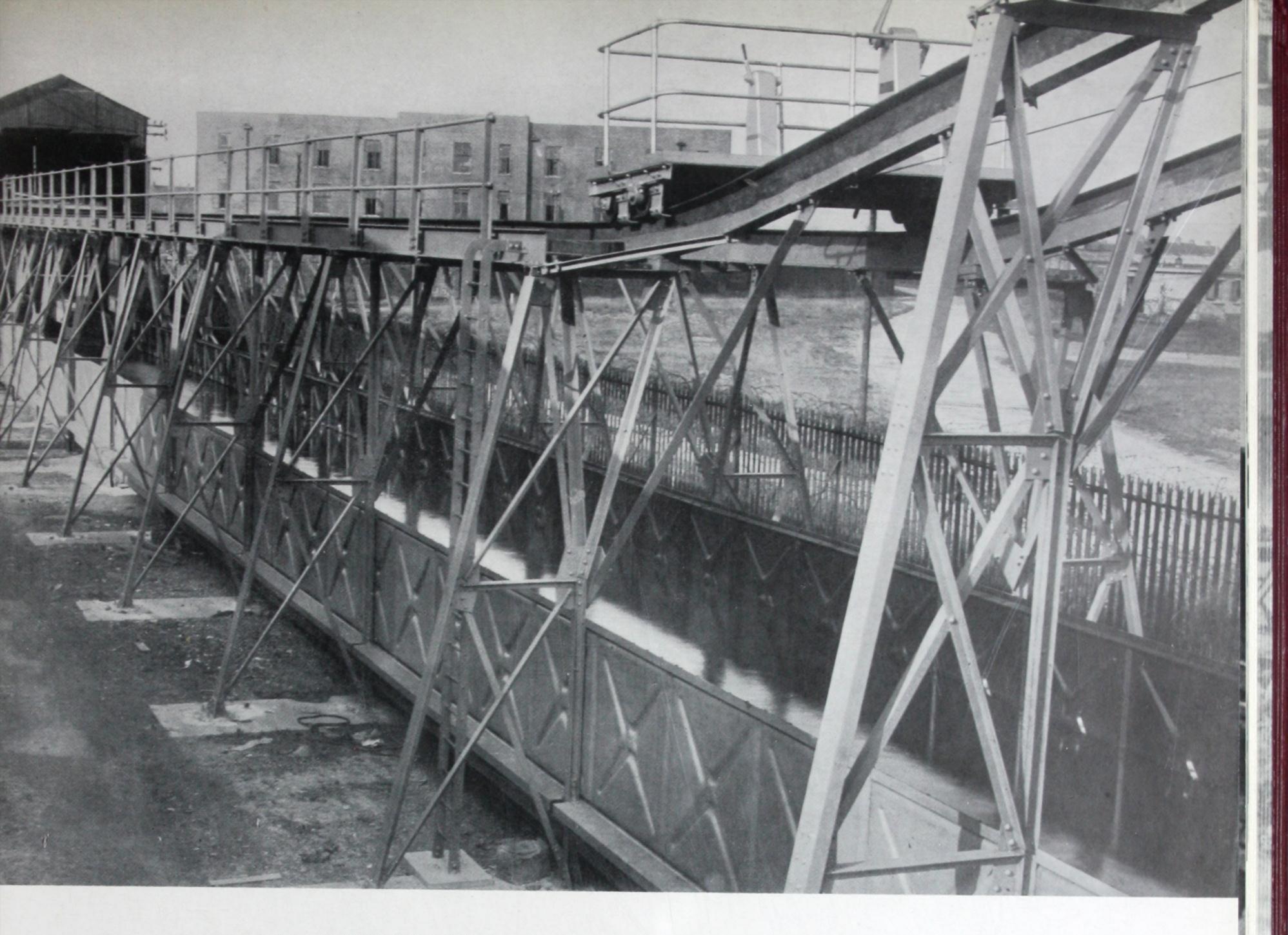
172. PRESSED STEEL TANK IN THE COUNTY BOROUGH OF NEWPORT, MON., ENGLAND 132,000 gallons capacity.



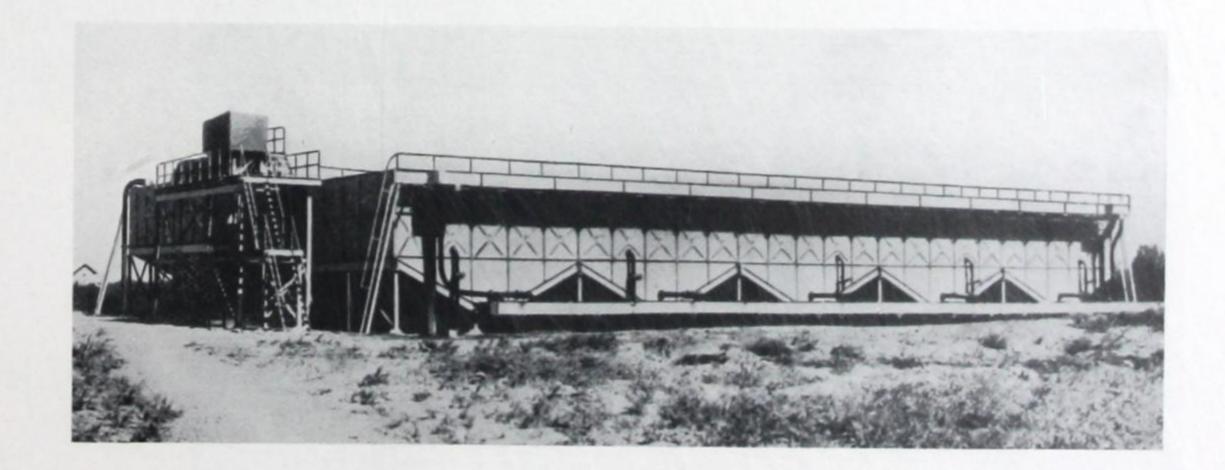
173. A BAGHOUSE BUILT OF PRESSED STEEL TANK PLATES



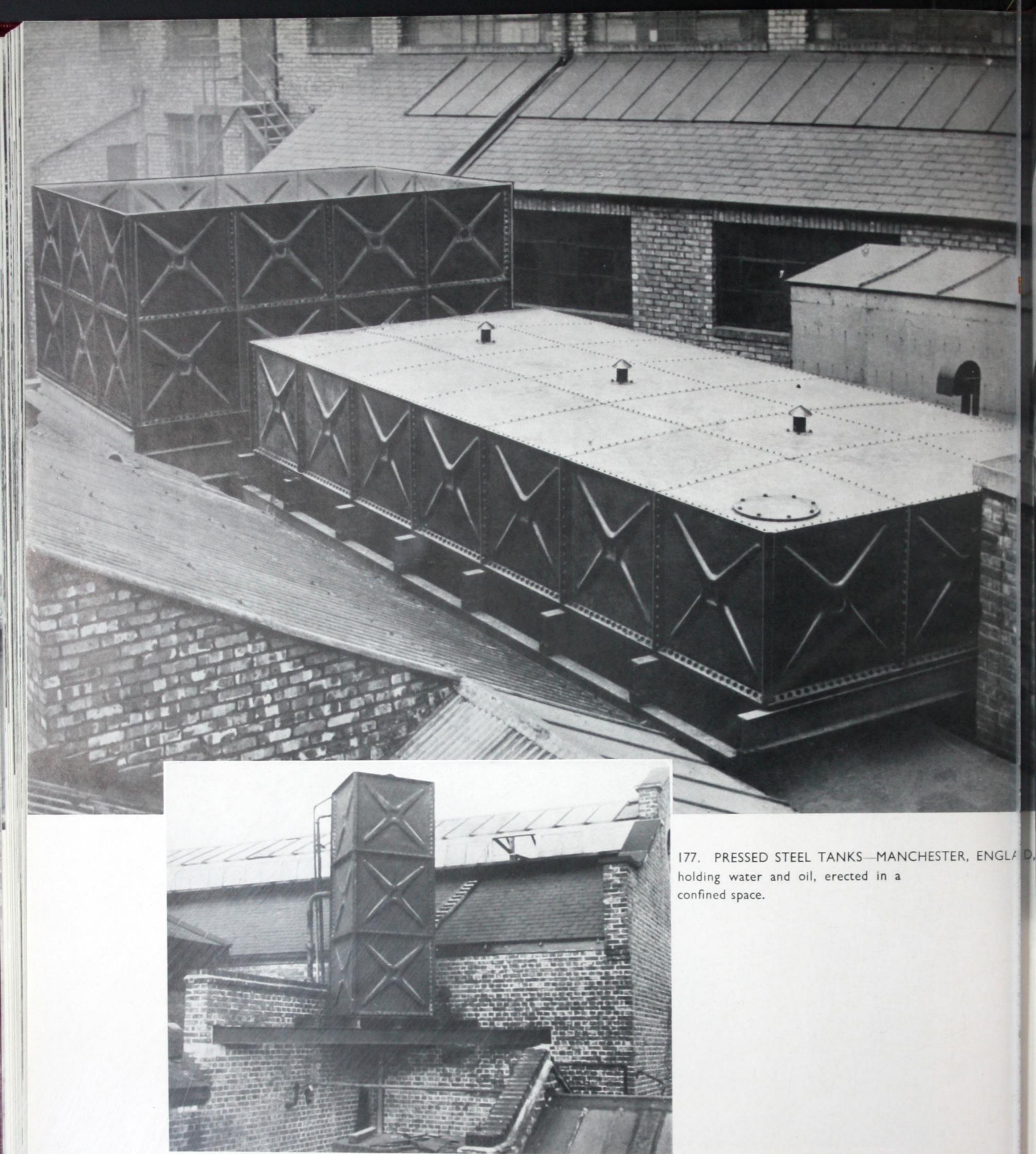
174. PRESSED STEEL TANK PLATE STORAGE INSTALLATION for waste wood chippings and sawdust.



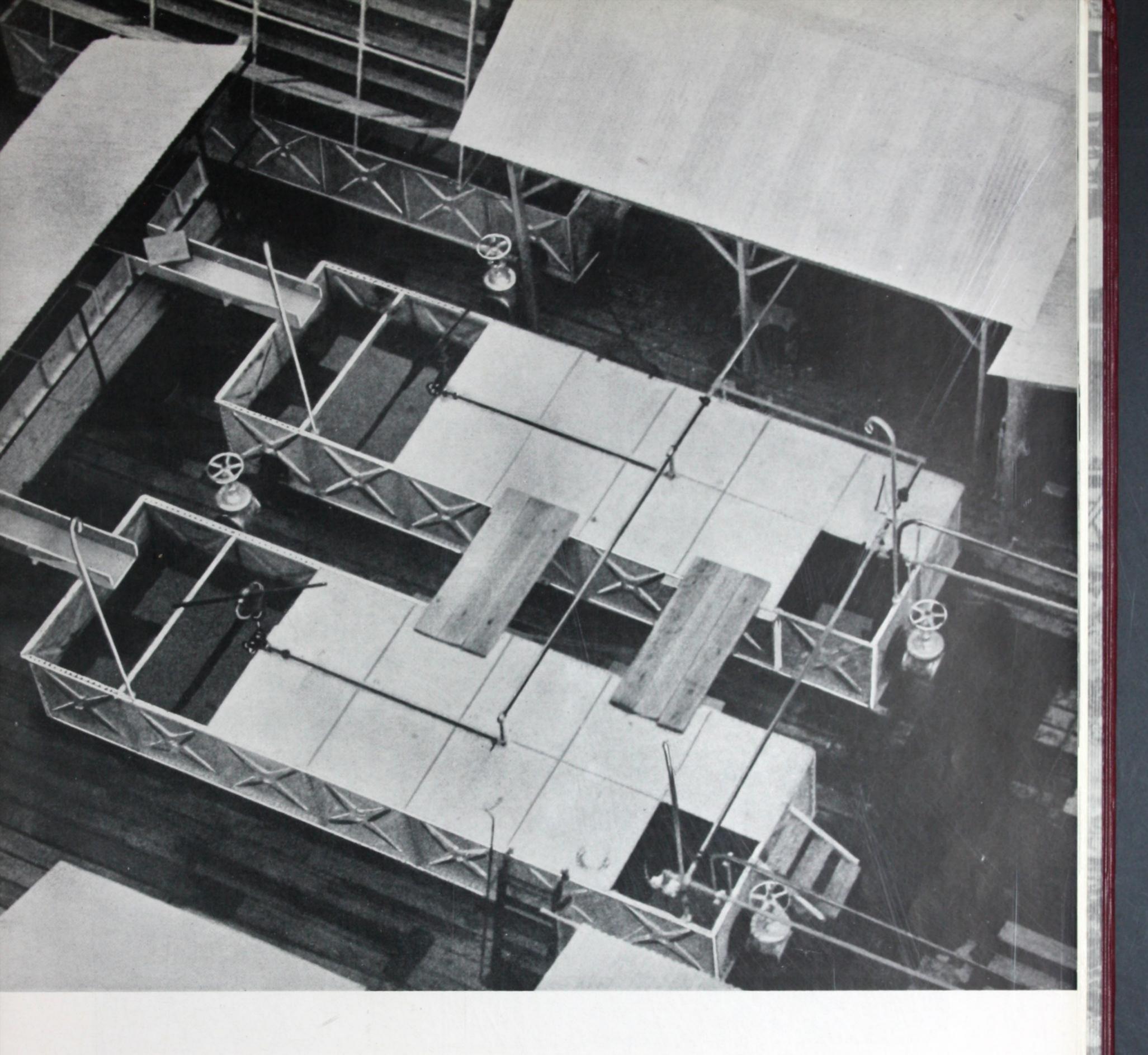
175. PRESSED STEEL TANK used in conjunction with a special structure for testing sea-plane floats and flying boat hulls.



176. A WATER TREATMENT PLANT incorporating two Pressed Steel Tanks, each with five compartments and hopper bottoms of special construction.



178. The adaptability of Pressed Steel Tanks to limited spaces is shown at this laundry in London.



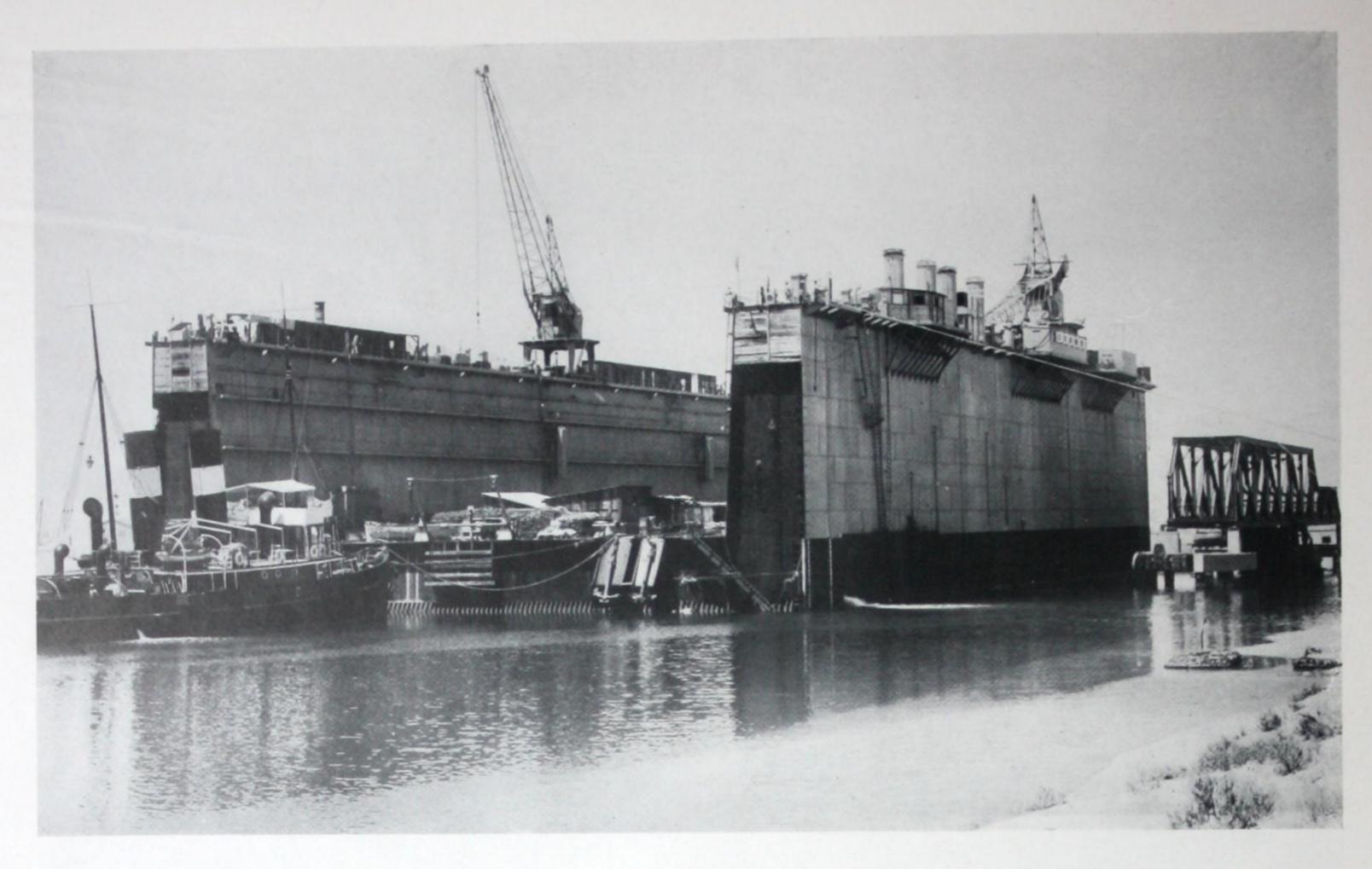
179. PRESSED STEEL TANKS incorporated in the mud cooling and storage plant on an oil field in Sarawak.

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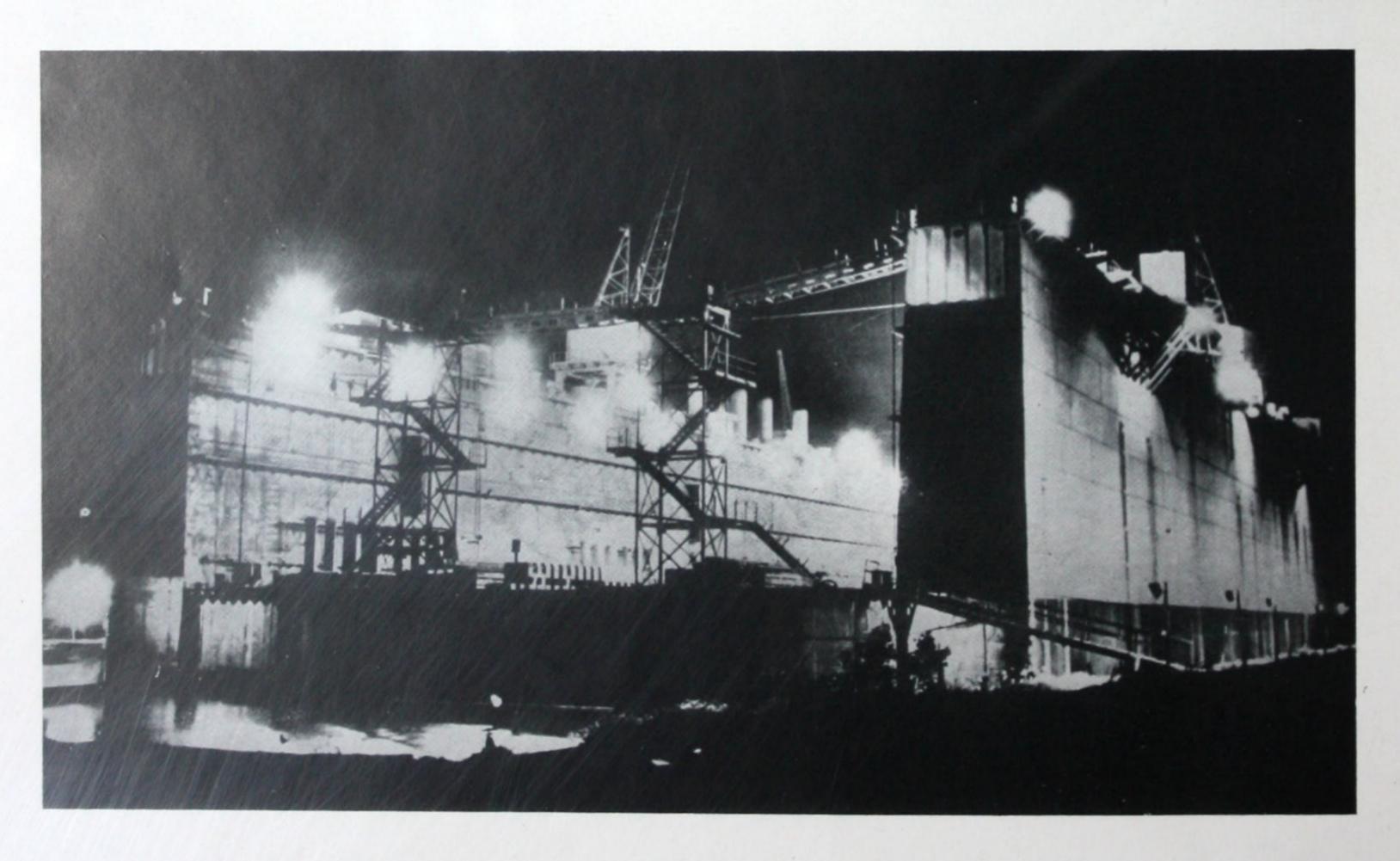


WORLD WAR II 1939-1945

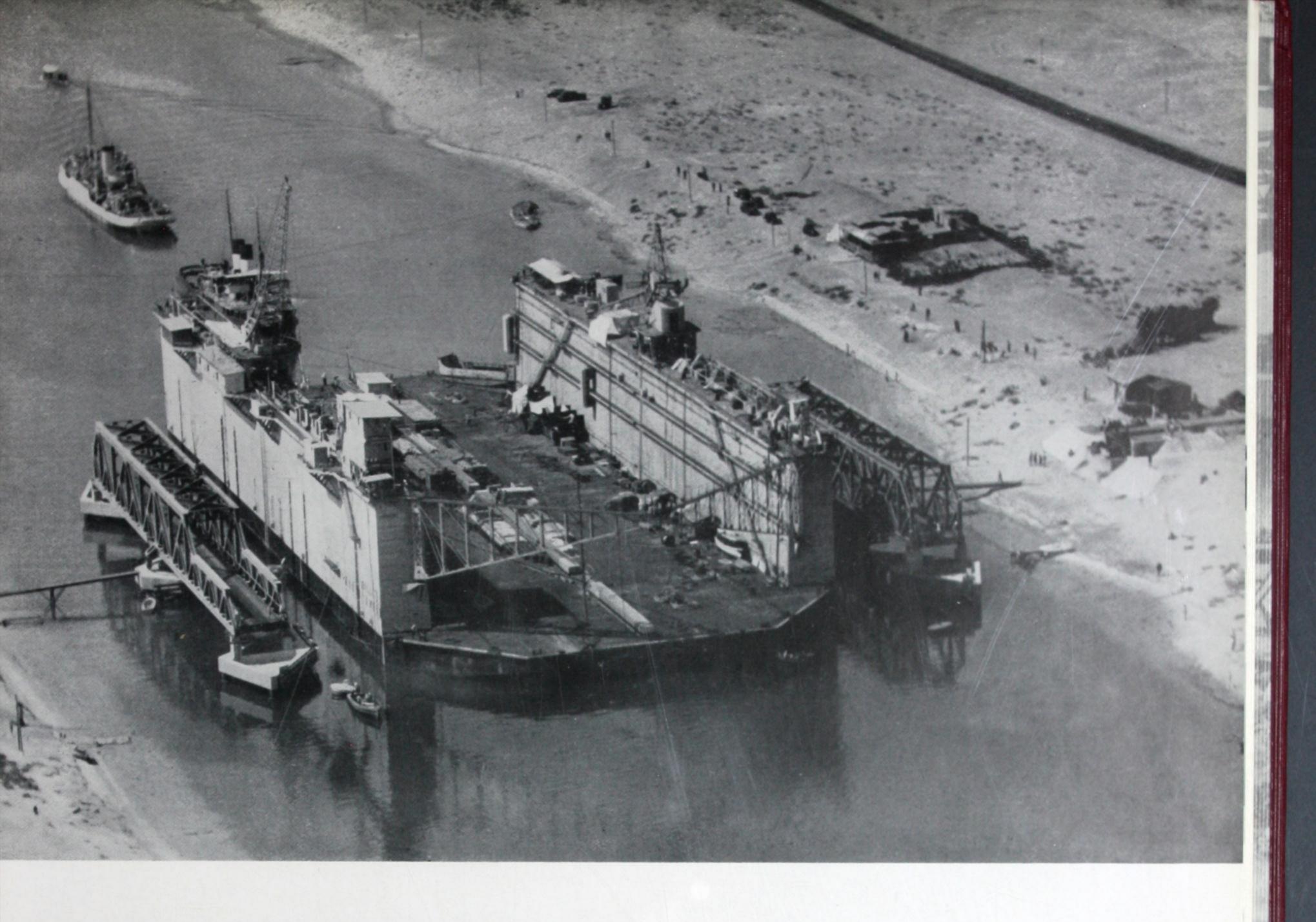


180. ADMIRALTY DOCK

Centre Section passing through El Ferdan Swing Bridge, Suez Canal.



181. ADMIRALTY DOCK
A night photograph of the Dock under construction.

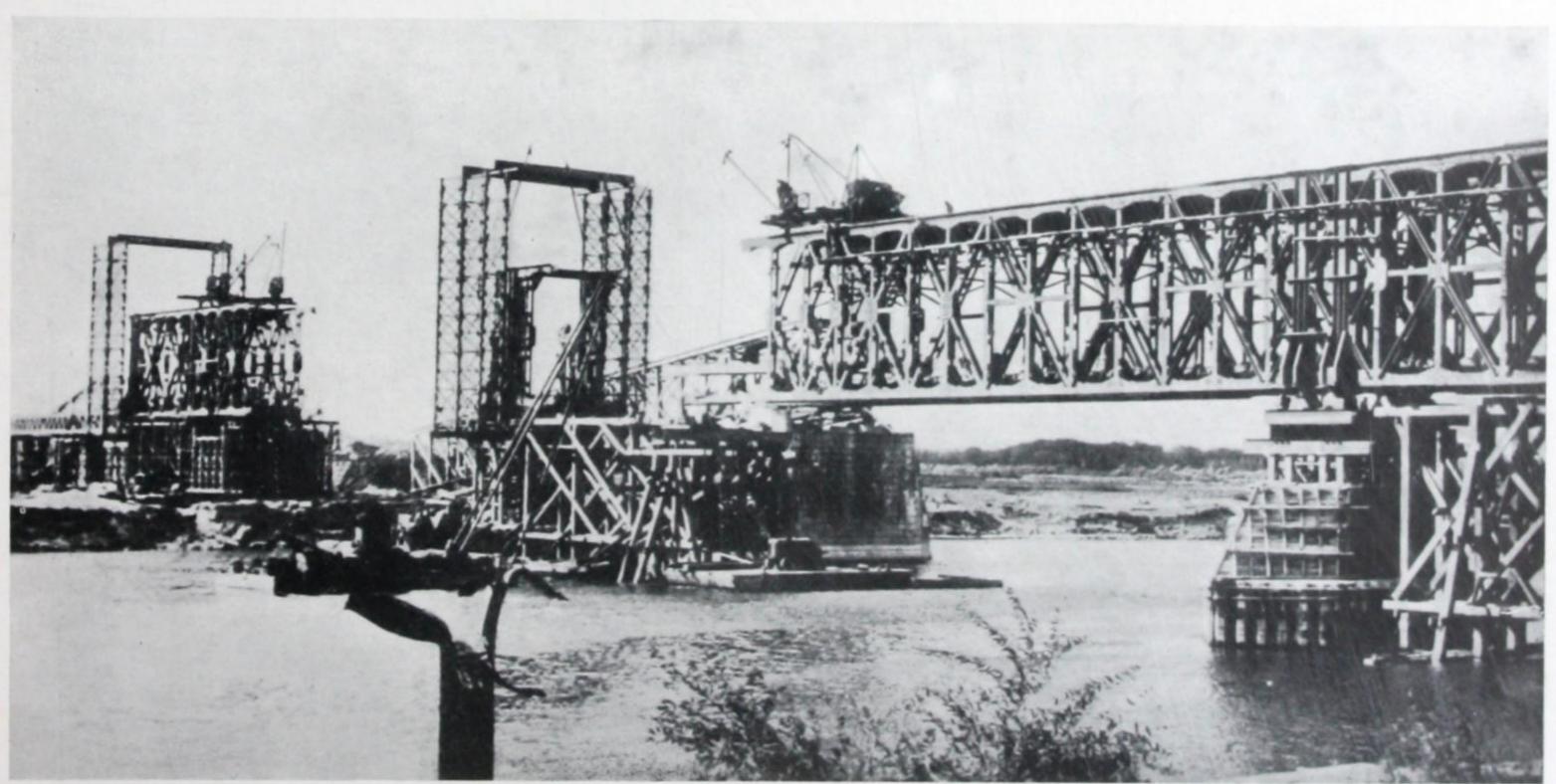


182. ADMIRALTY DOCK

A section of the Dock passing through Suez Canal. This and several other floating docks were built in Bombay by the Braithwaite, Burn and Jessop Construction Co. Ltd.

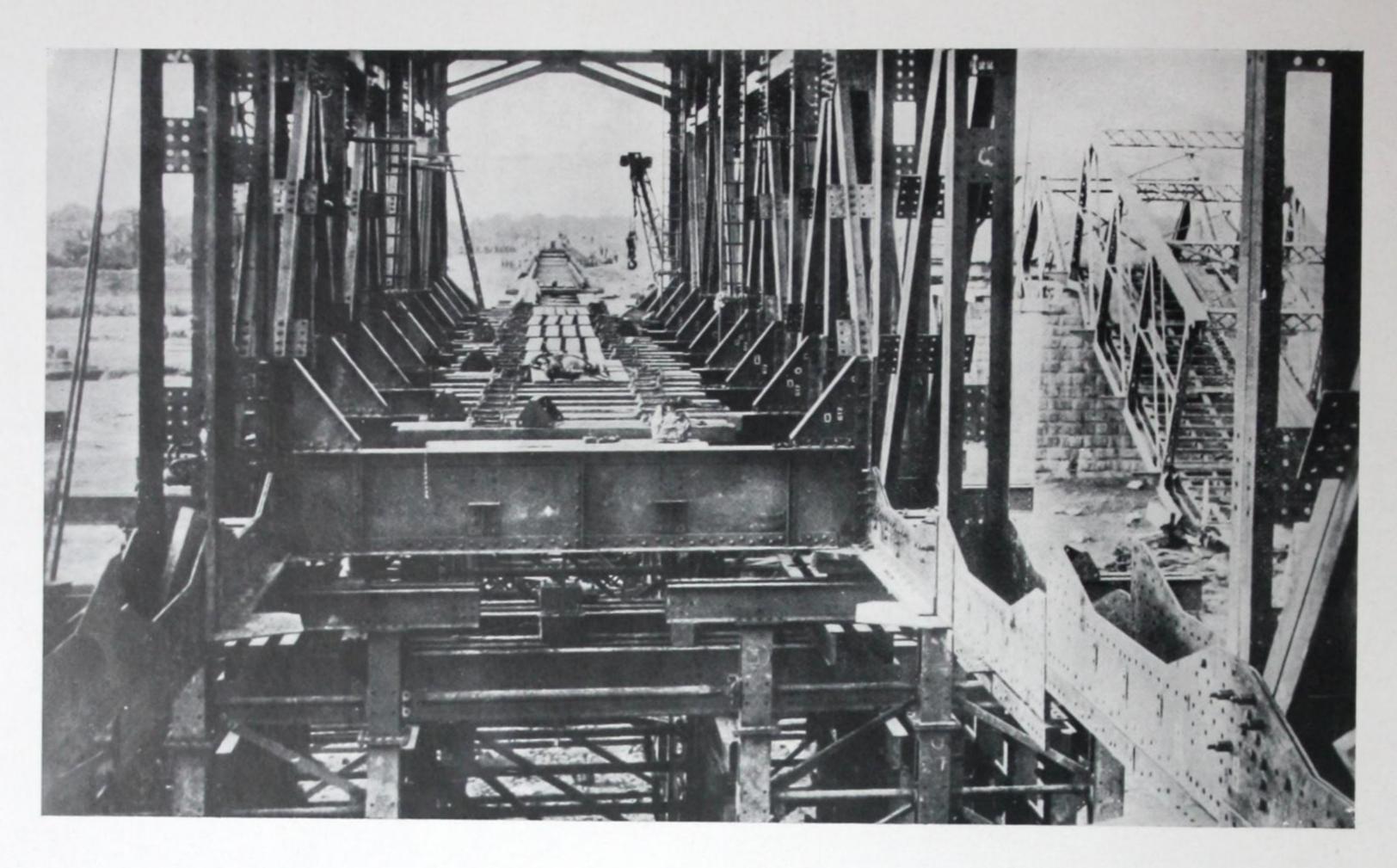






184. MILITARY BRIDGE OVER RIVER IJSSEL—DEVENTER, HOLLAND Top: Original Bridge after demolition by enemy.

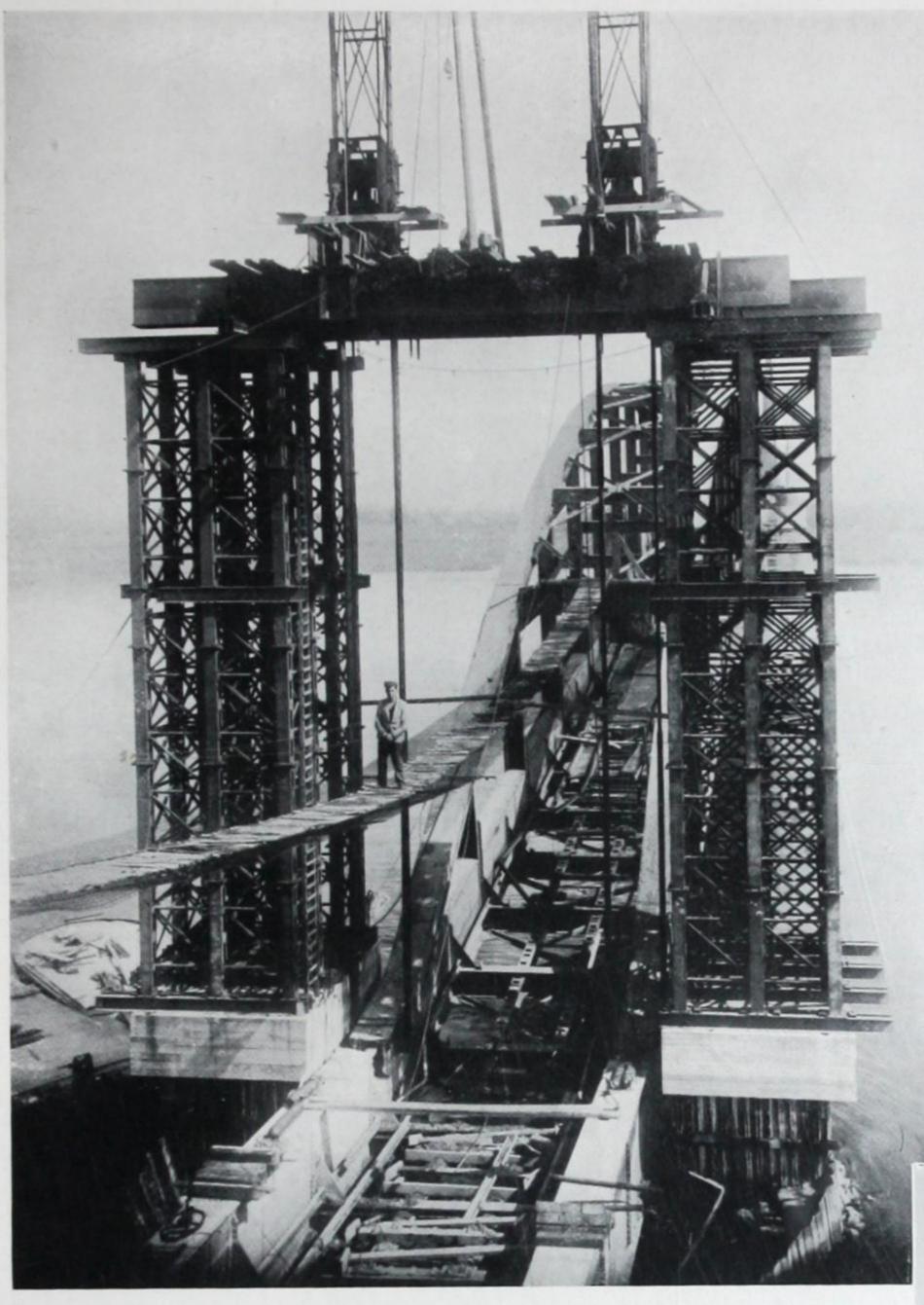
Below: EVERALL SECTIONAL TRUSS BRIDGE REPLACING THE ORIGINAL Second and Third Spans (each 230 feet) under construction.

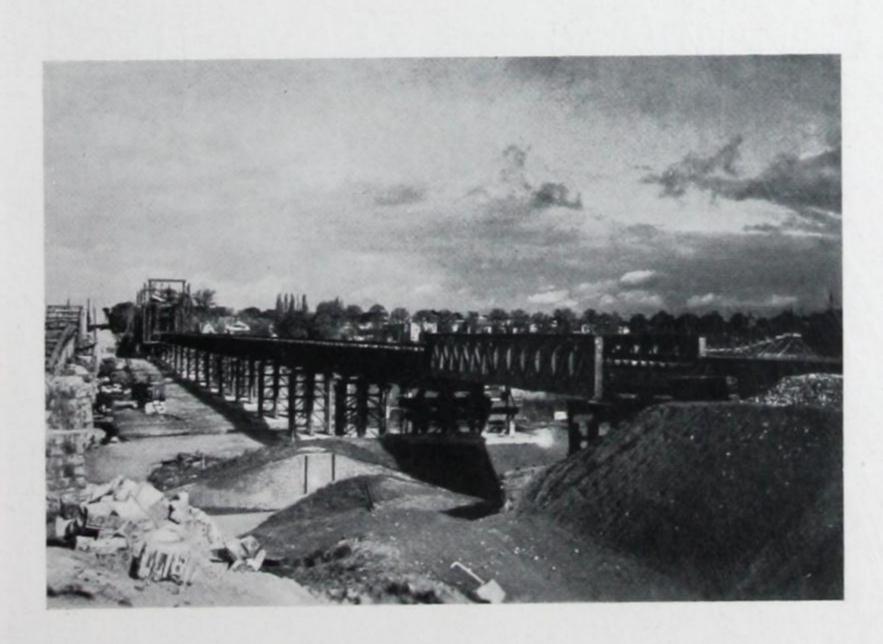


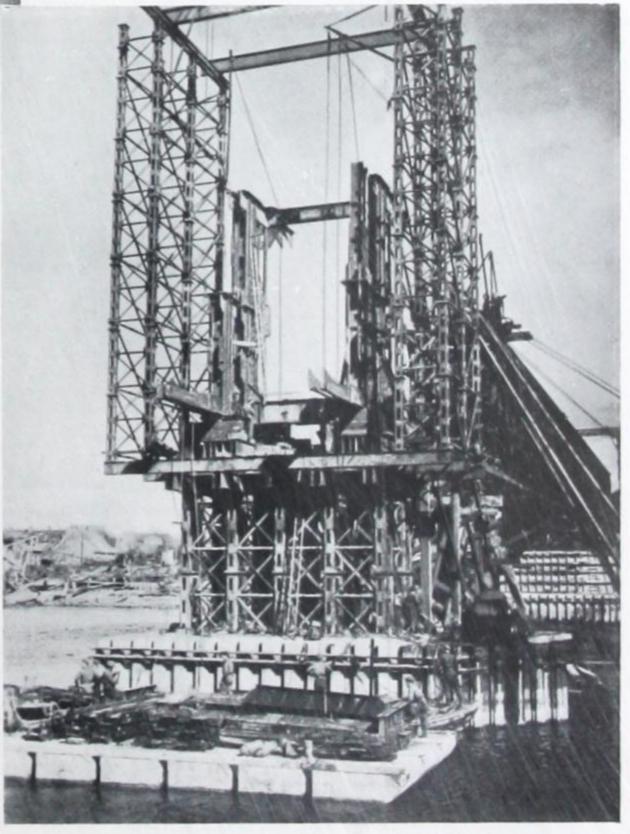
185. EVERALL SECTIONAL TRUSS BRIDGE OVER RIVER IJSSEL, DEVENTER— NETHERLANDS, View through bridge as third span nears completion.



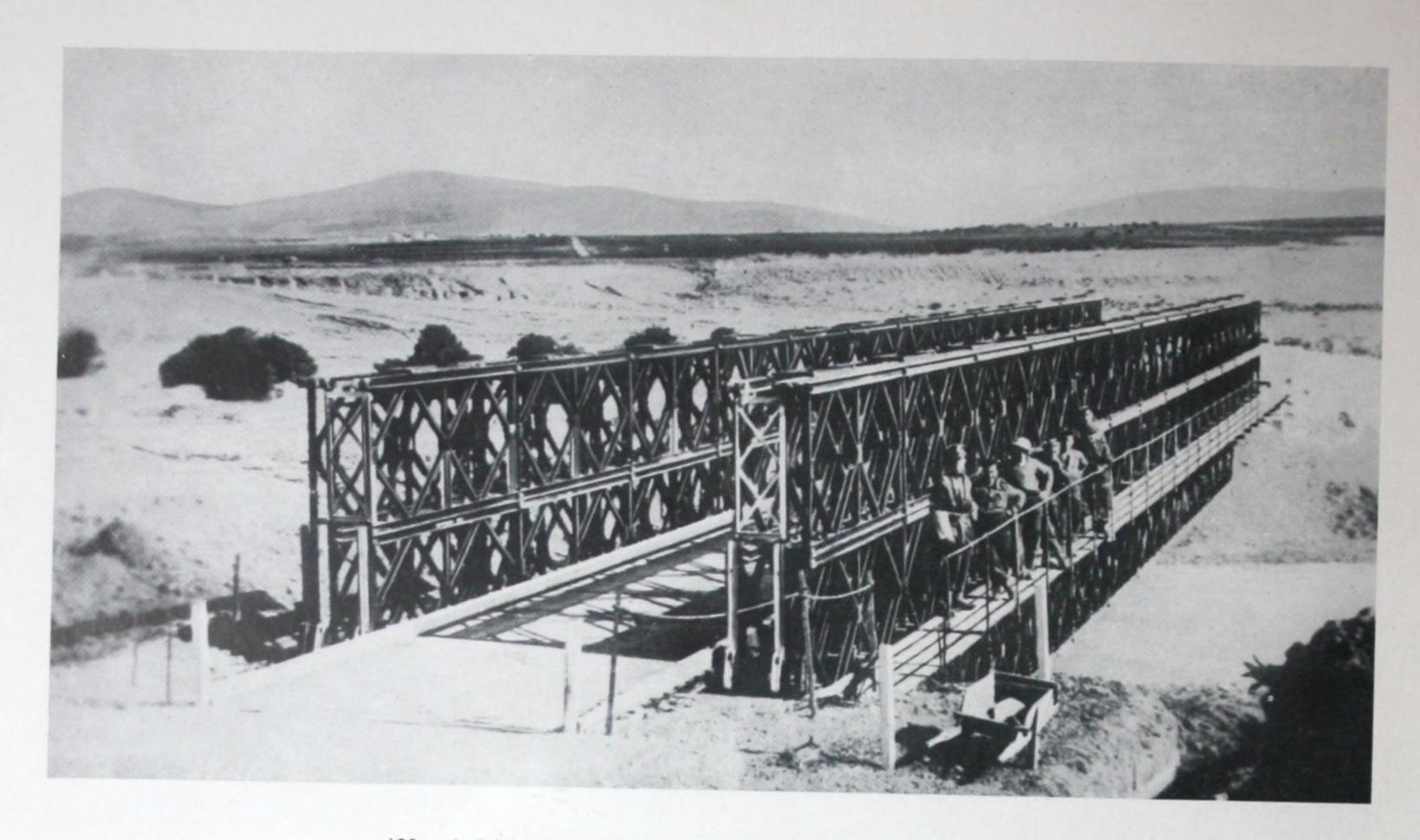
186. EVERALL SECTIONAL TRUSS BRIDGE OVER RIVER IJSSEL, DEVENTER— NETHERLANDS, Lowering a chord unit into position.



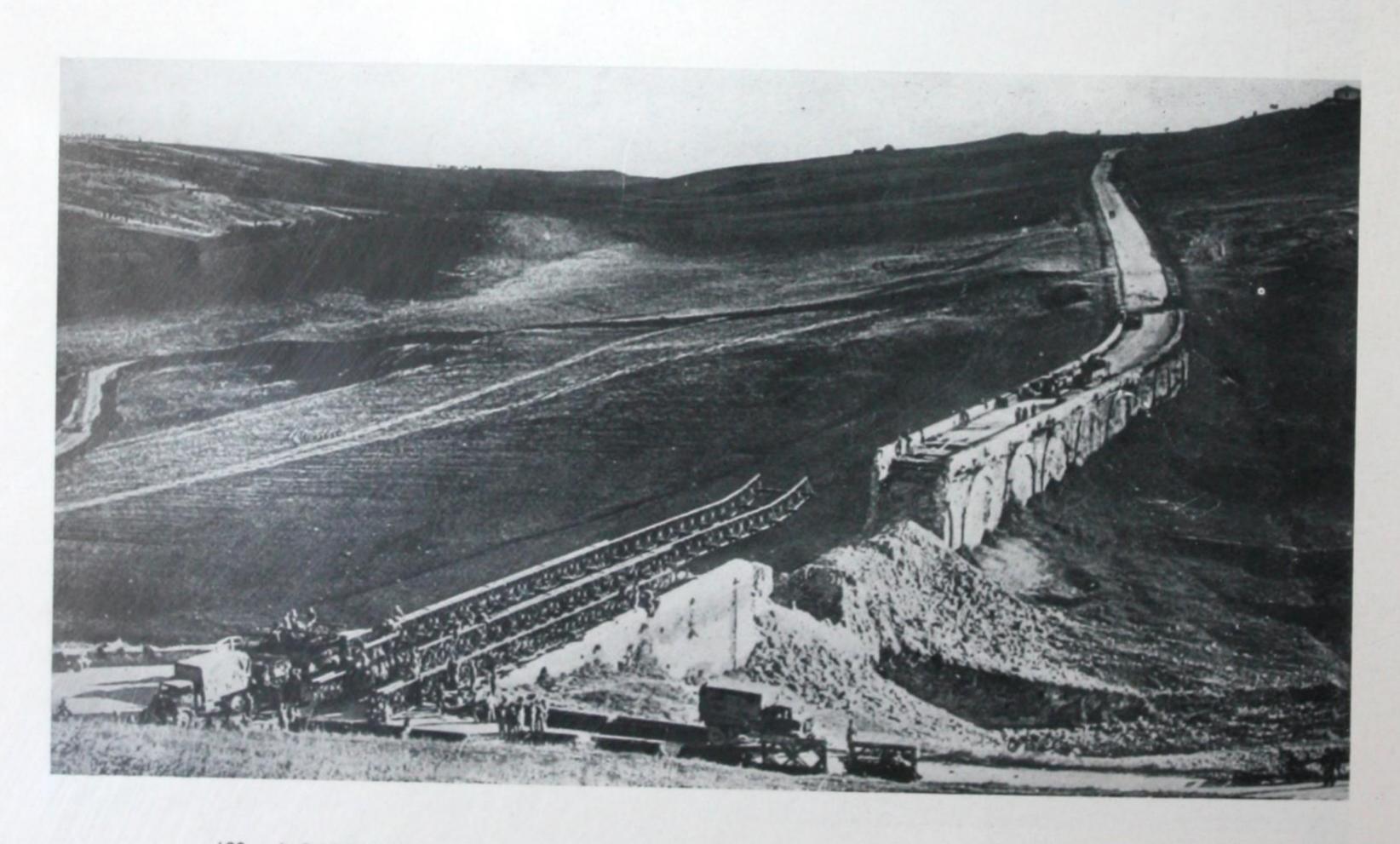




187. REPAIRS TO RAILWAY BRIDGE OVER RIVER WAAL, NIJMEGEN, NETHERLANDS A close-up of the lifting towers taken after the span had been lifted sufficiently to allow the damaged box girder to be cut completely away above water level.



188. A BAILEY BRIDGE ACROSS THE TESSA RIVER-ITALY



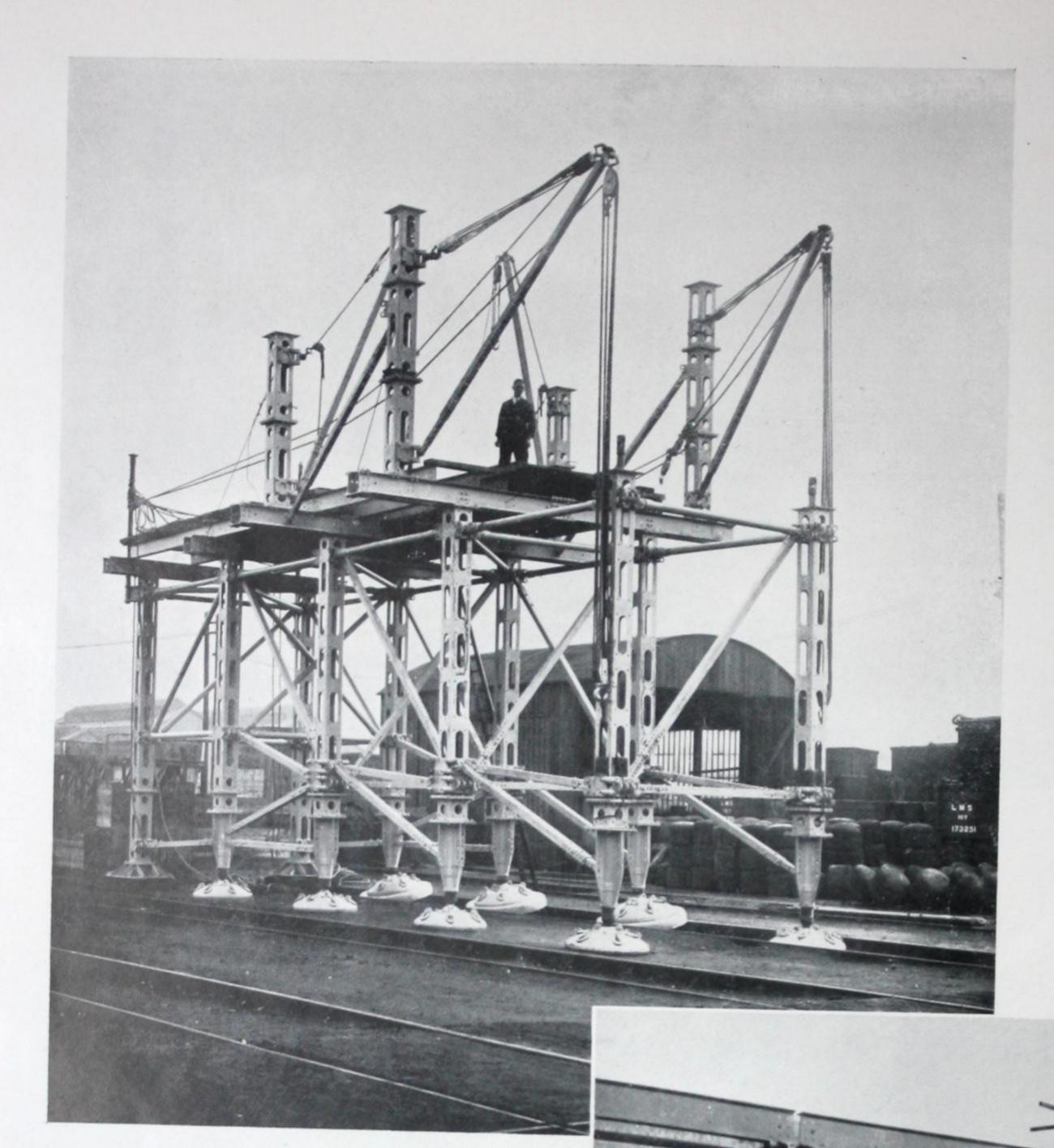
189. A BAILEY BRIDGE DURING CONSTRUCTION OVER A GAP IN A ROAD IN ITALY



190. MARK II BOX GIRDER BRIDGE BEING LAUNCHED

Above: Launching a girder. Below: The Bridge in use.

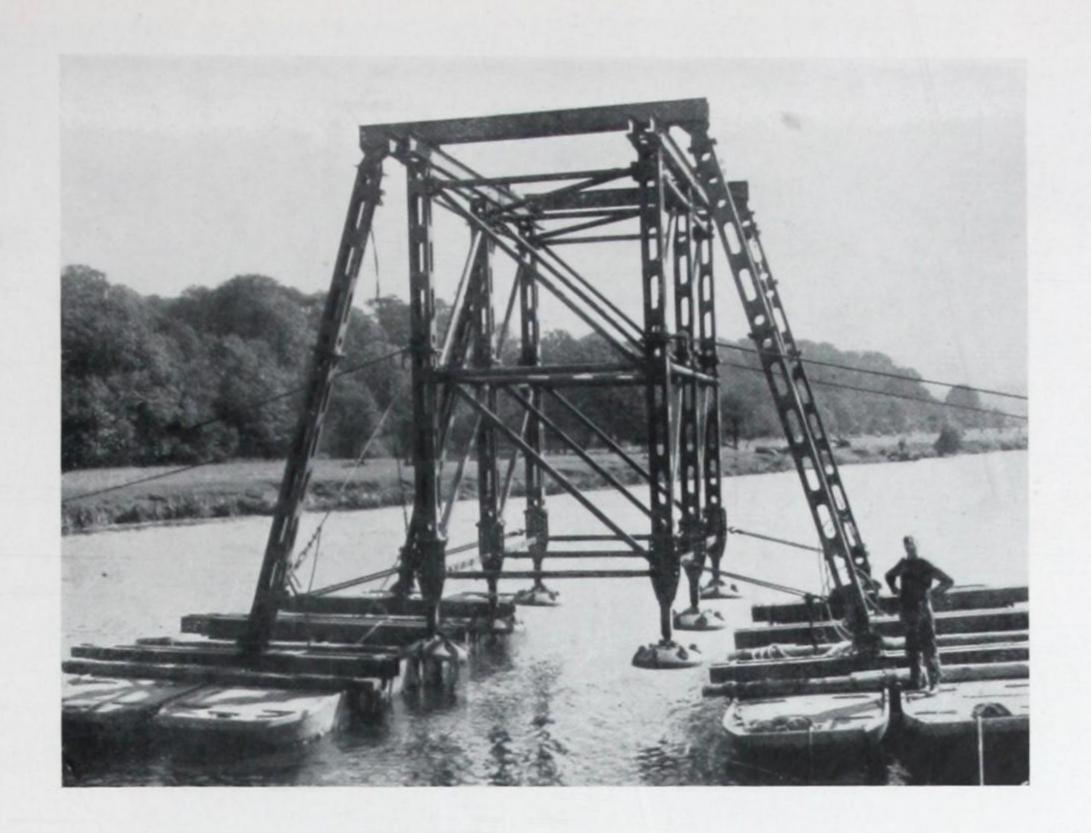




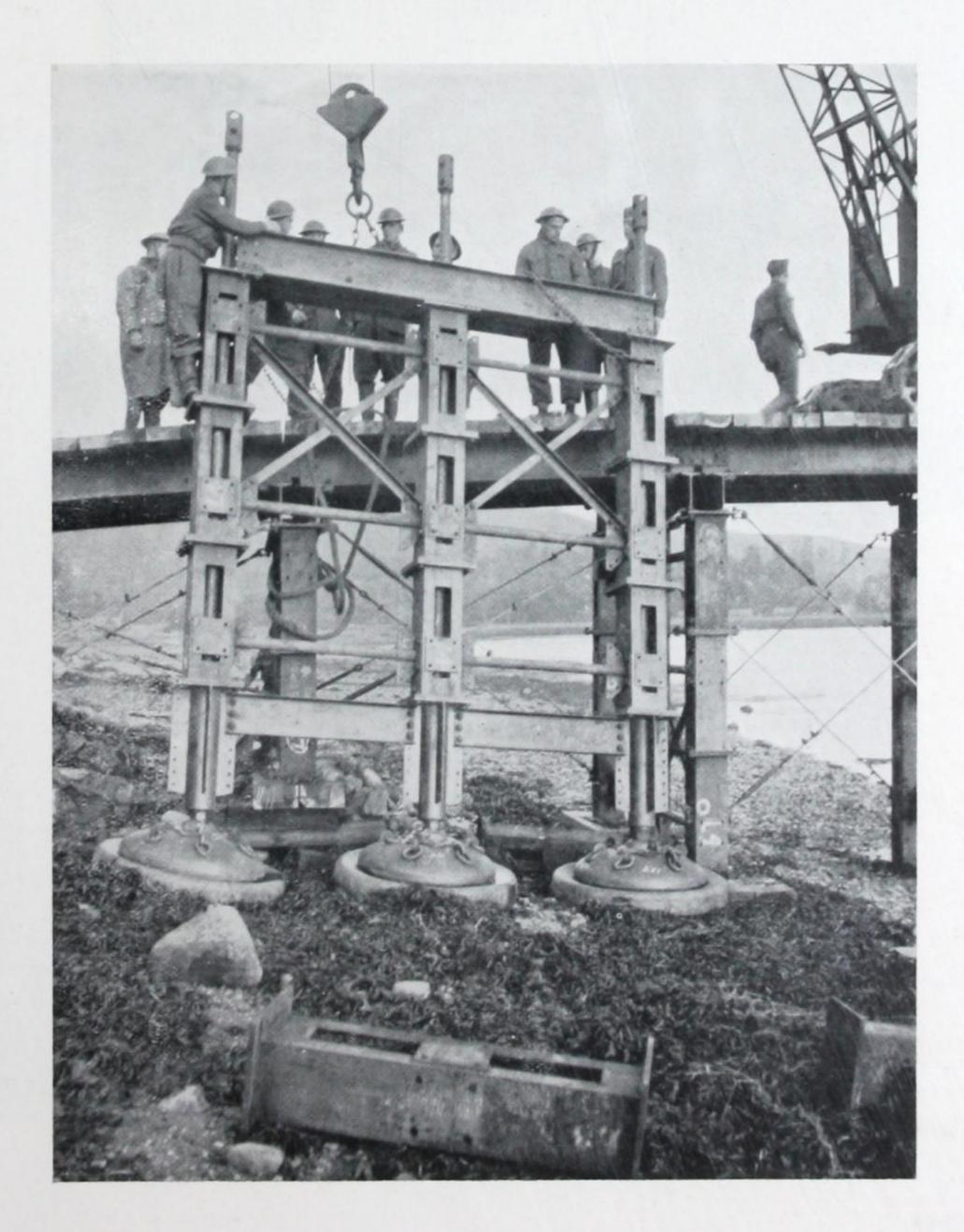
191. "V" TYPE TRESTLE PIERS

Trestle Bent assembled ready for placing.

Note "Camel foot" base designed to overcome irregularities of foundation level.



193. Lower section of bridge trestle before positioning.



194. A section of trestle ready for launching. Note the jacks passing through the columns for adjusting the level of "Camel foot" bases.

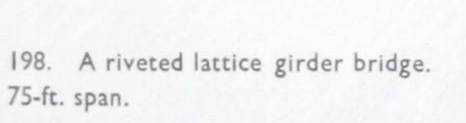
195. EMERGENCY REPLACEMENT BRIDGES

> 196. A riveted bridge. 40-ft. span.

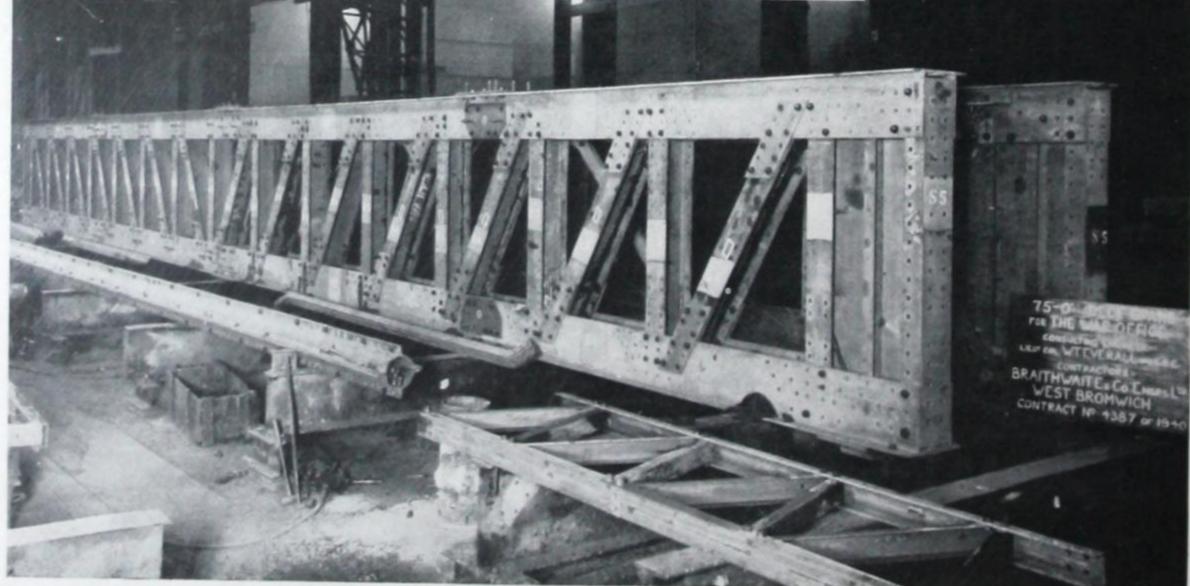




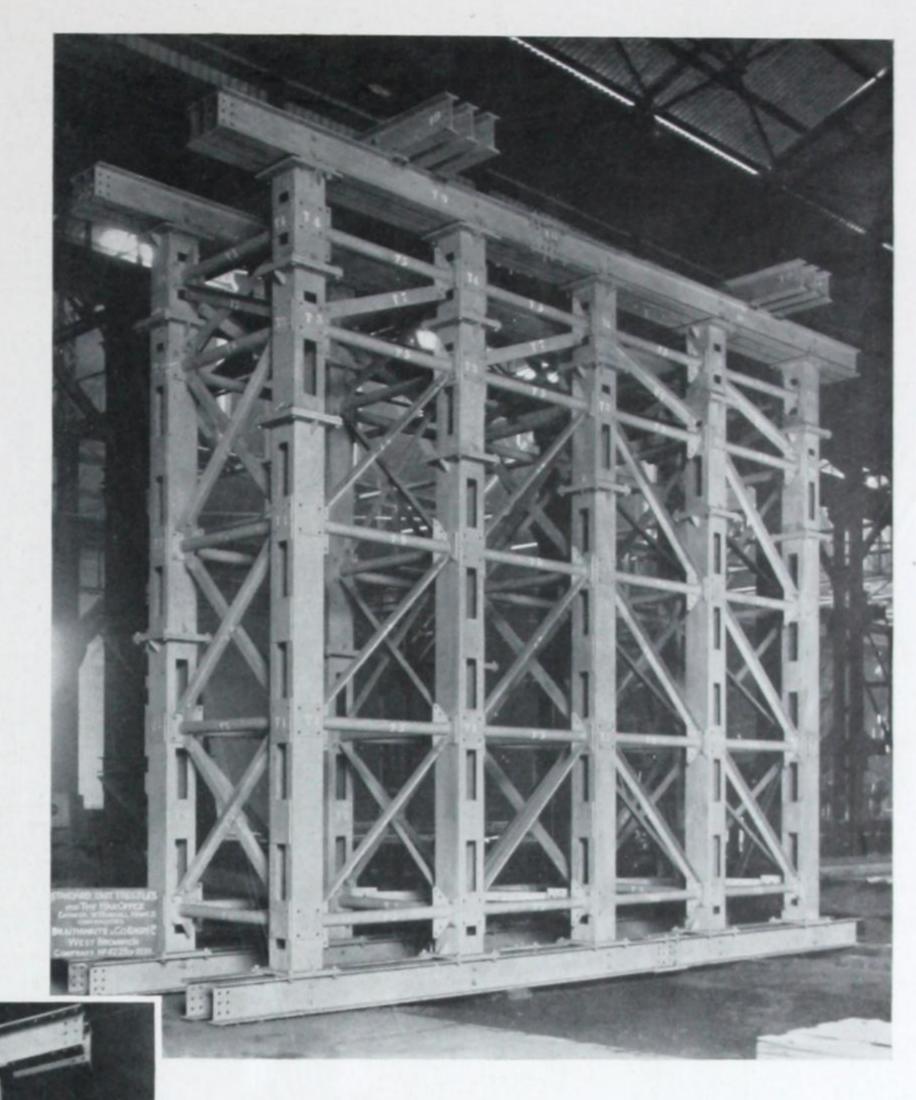
197. A welded bridge. 40-ft. span.



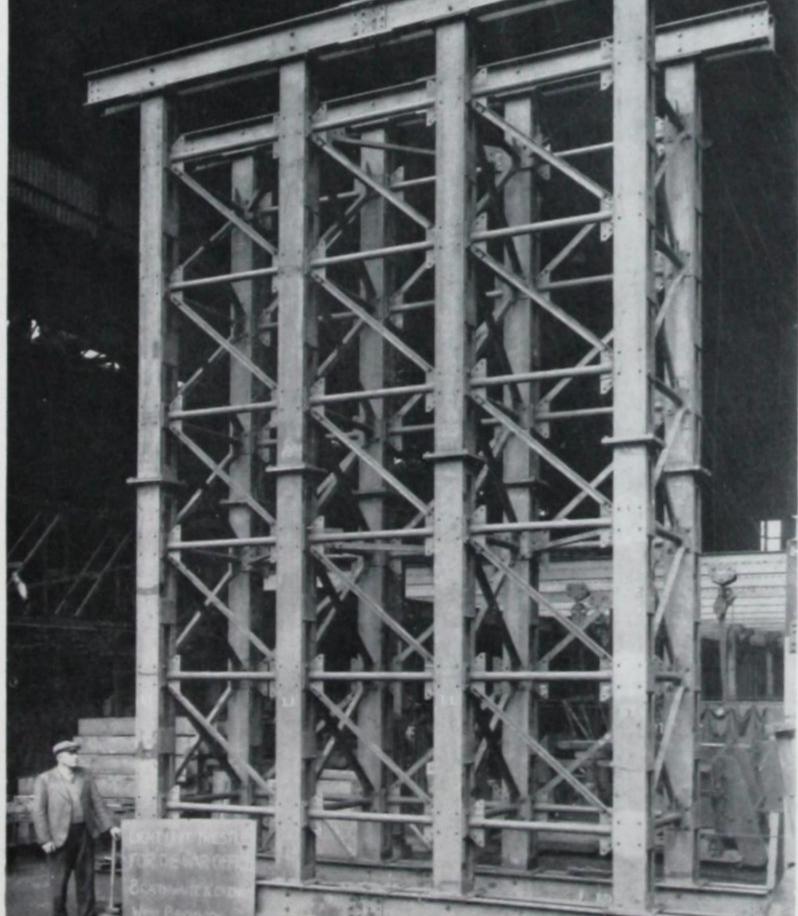
75-ft. span.



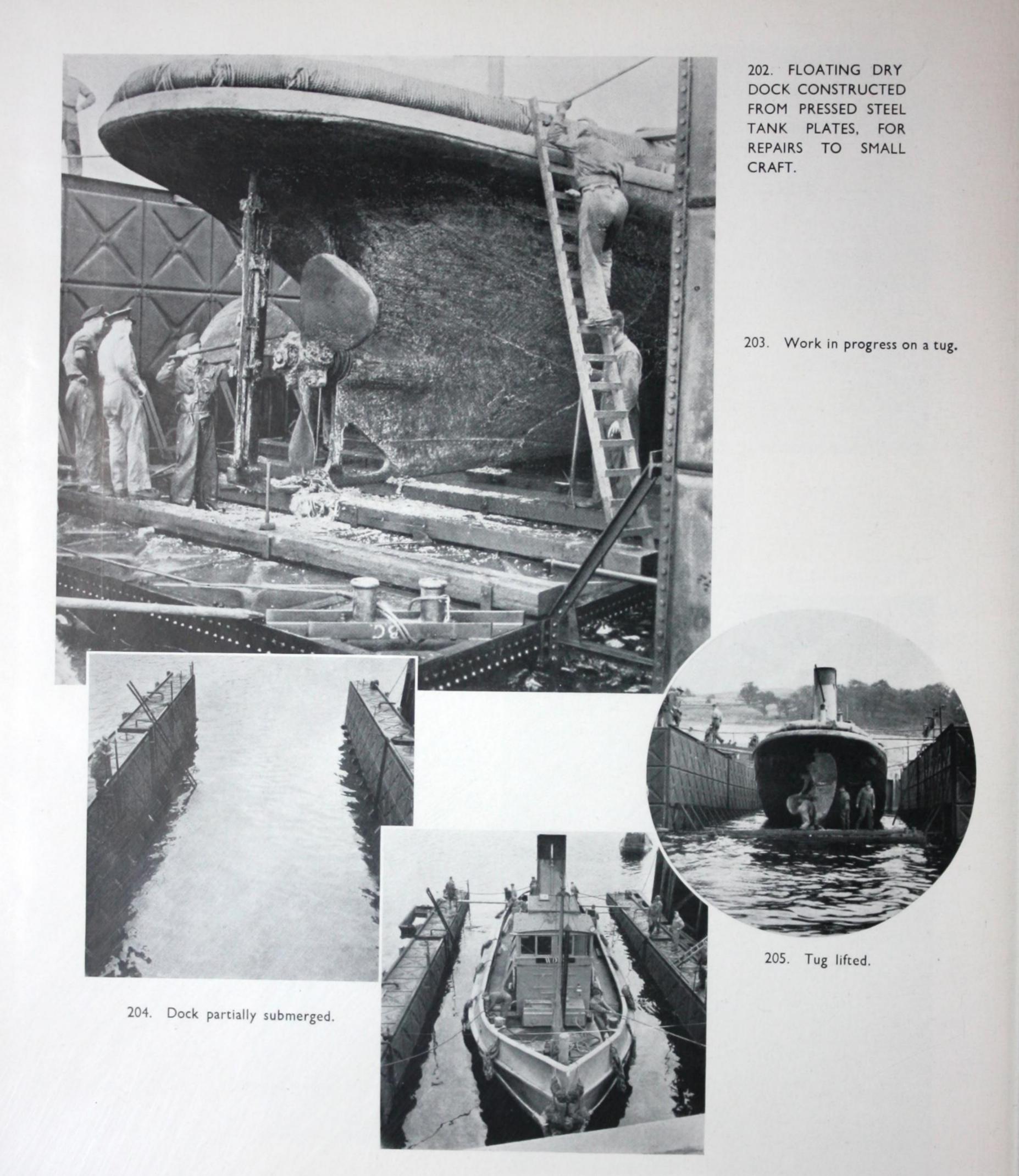
199. TRESTLES FOR EMERGENCY REPLACEMENT BRIDGES



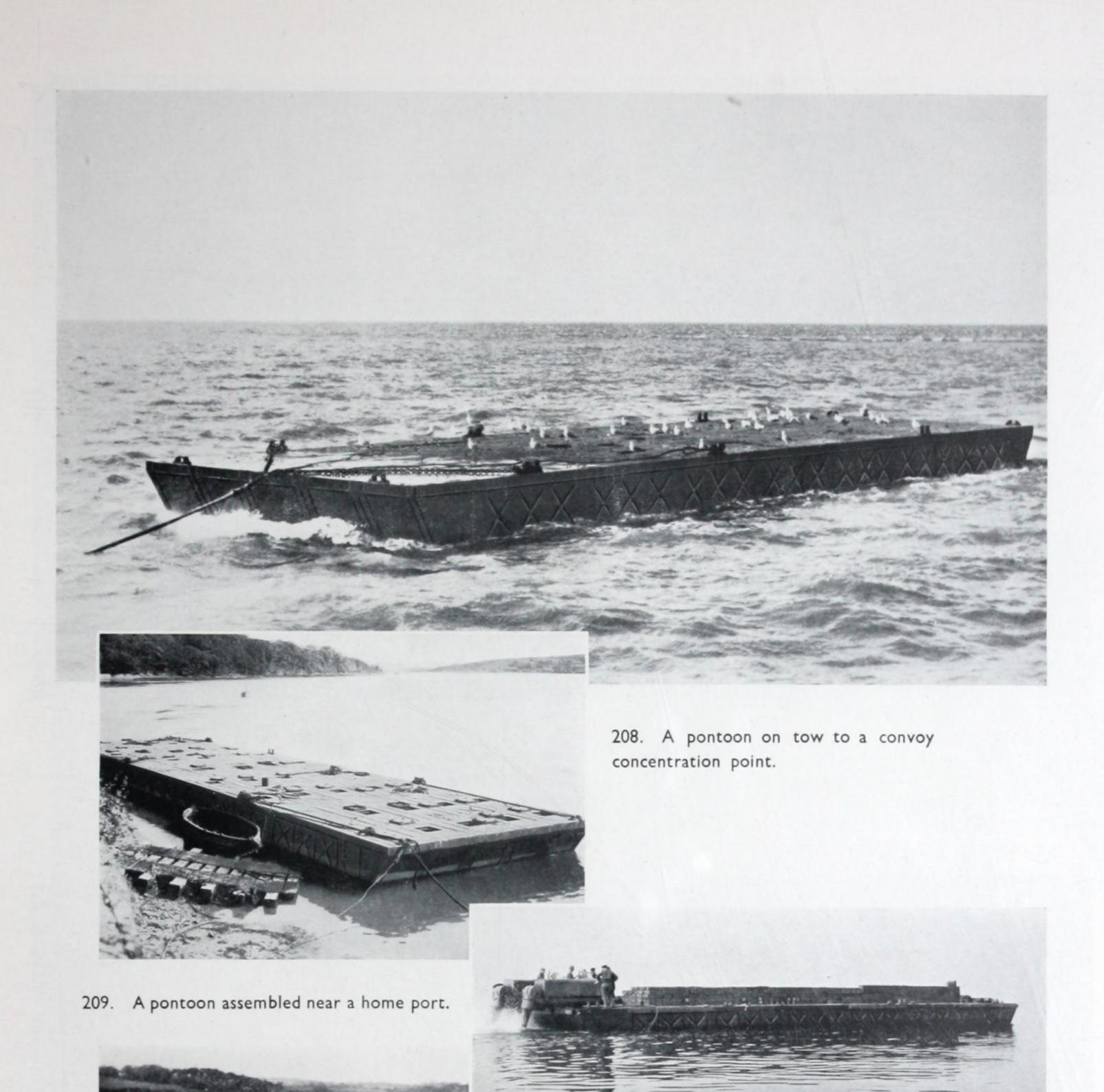
200. Above: Heavy Unit type trestle.

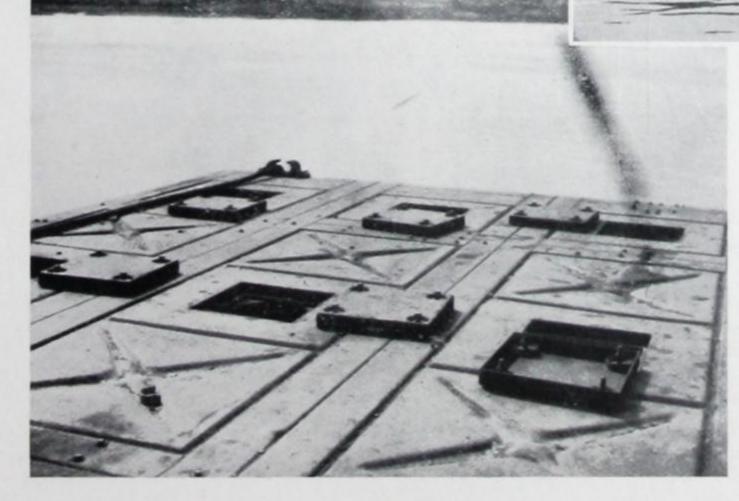


201. Light Unit type trestle.



206. Tug entering dock.



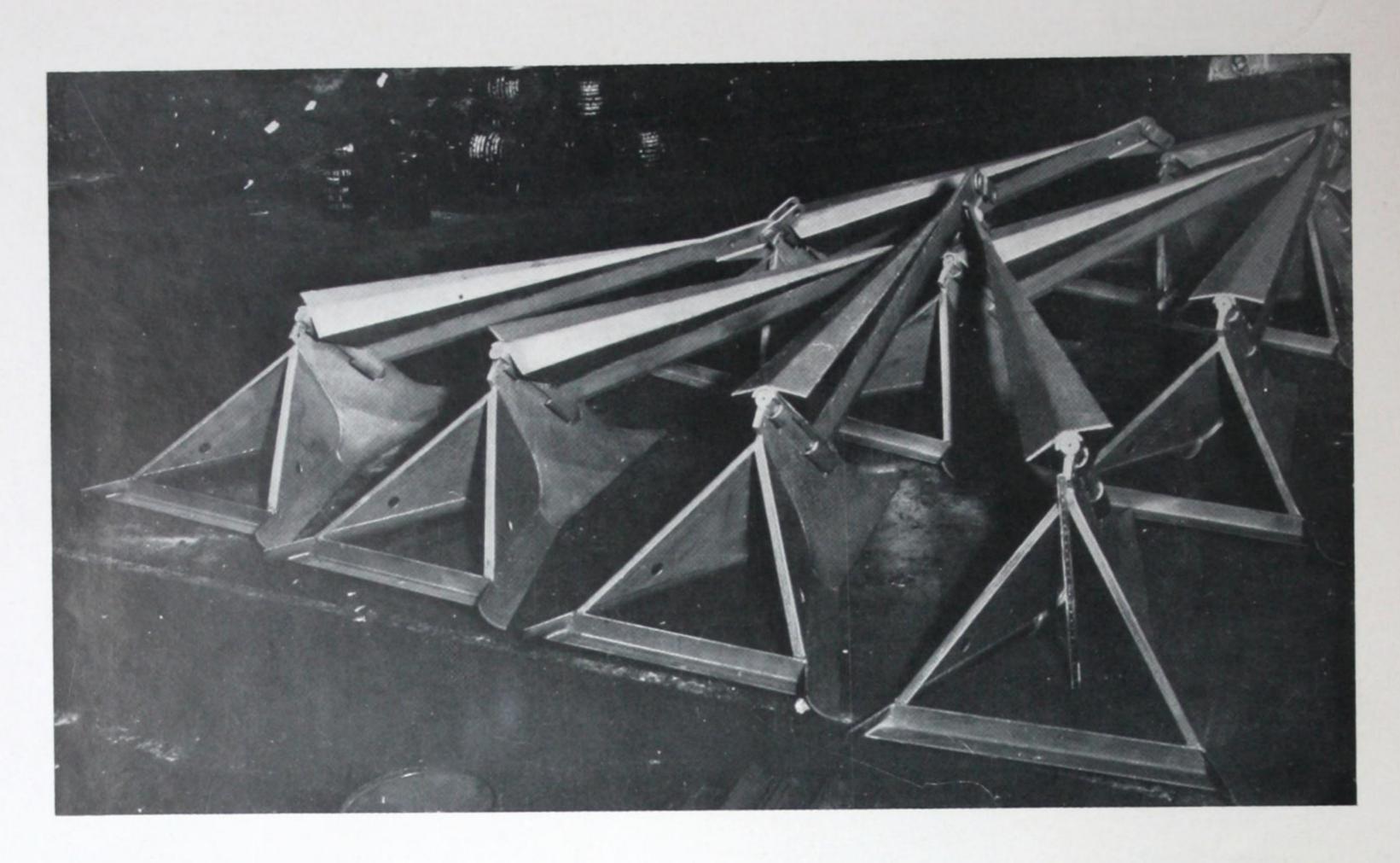


211. Part of the deck.

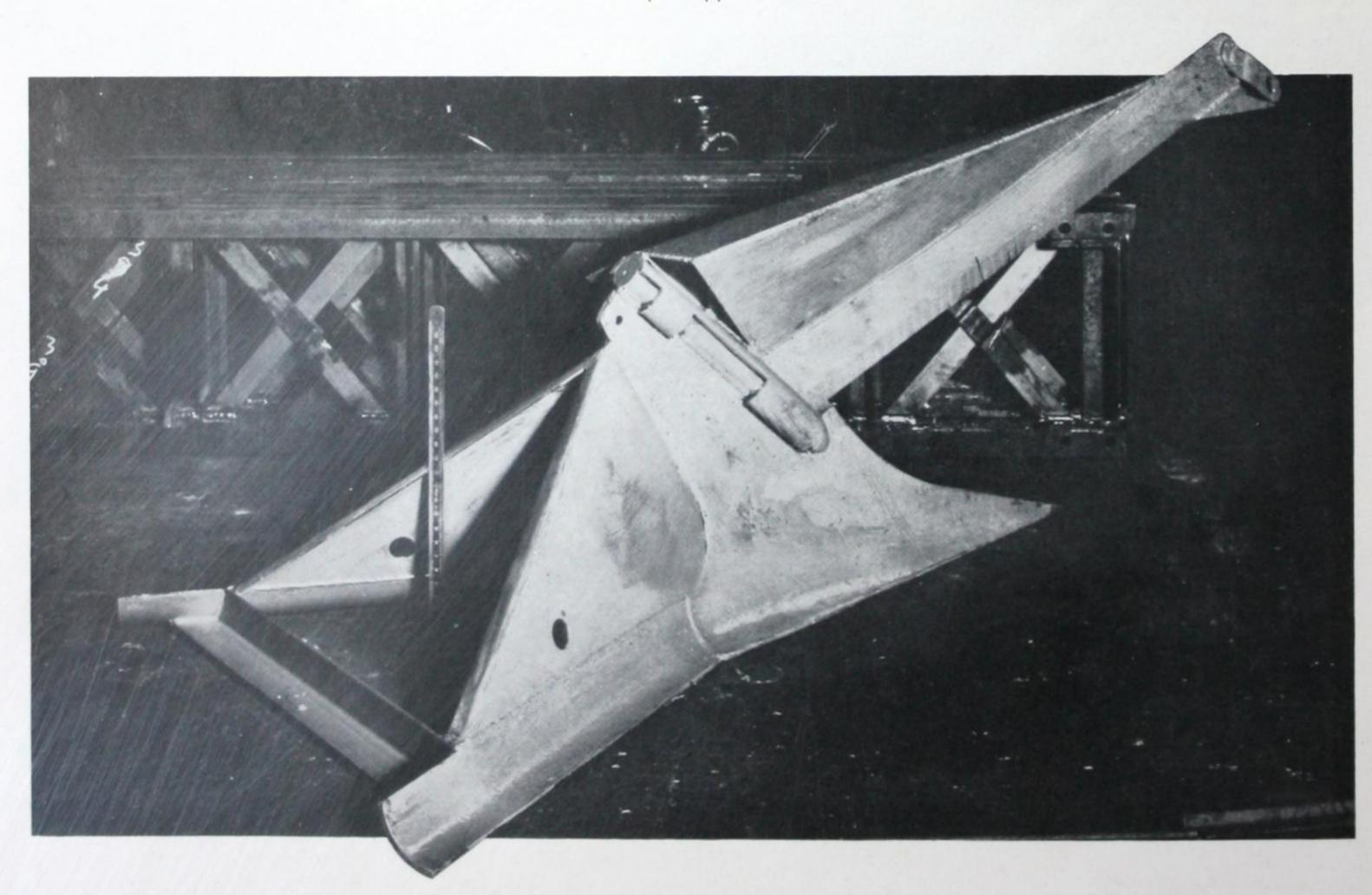
210. A smaller self-propelled pontoon.

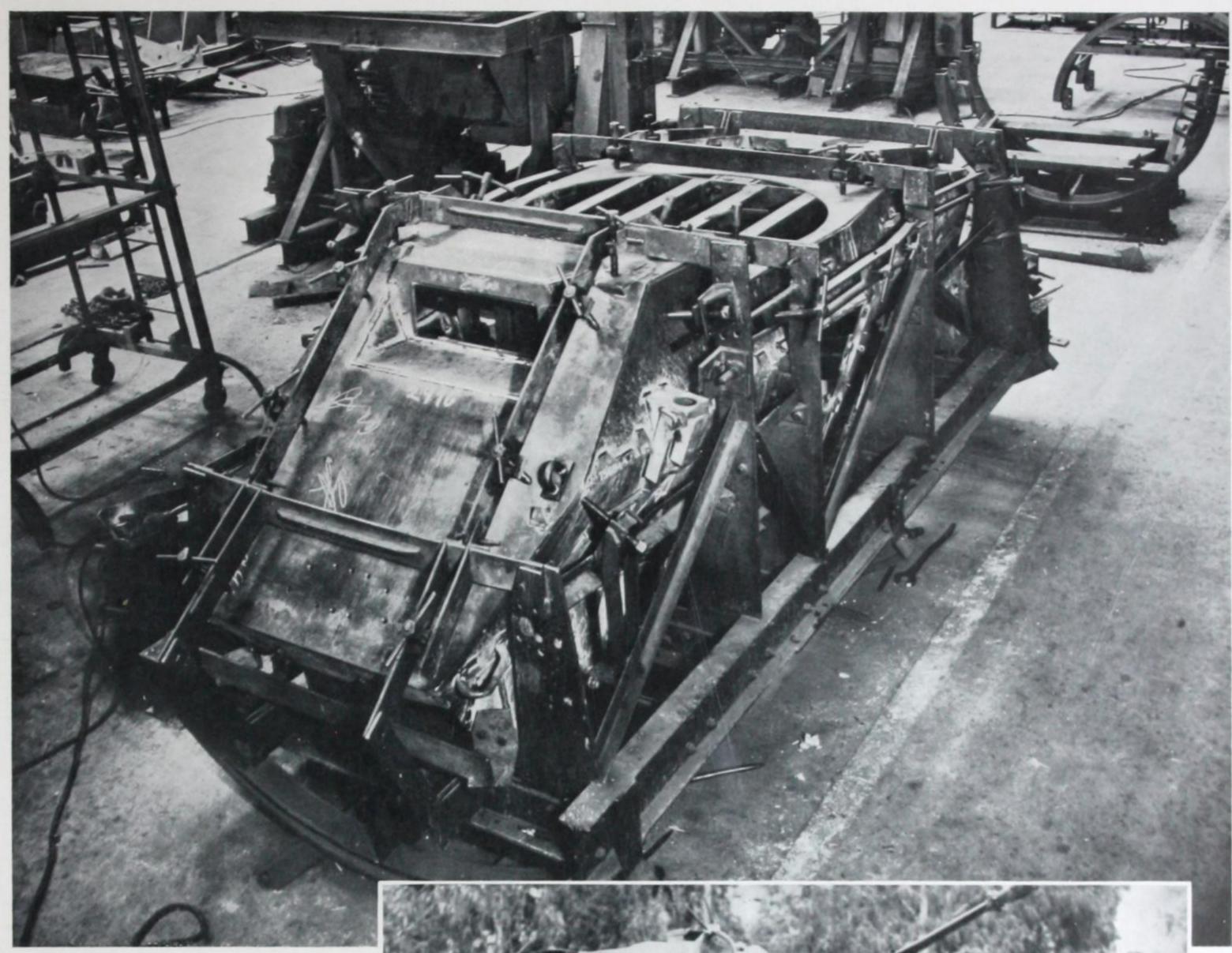
207. MILITARY PONTOONS BUILT OF PRESSED STEEL TANK PLATES.

Many were used on the Normandy beaches and in Burma.



Designed for use with Landing Craft and for mooring the pontoons of "Whale" pier approaches.

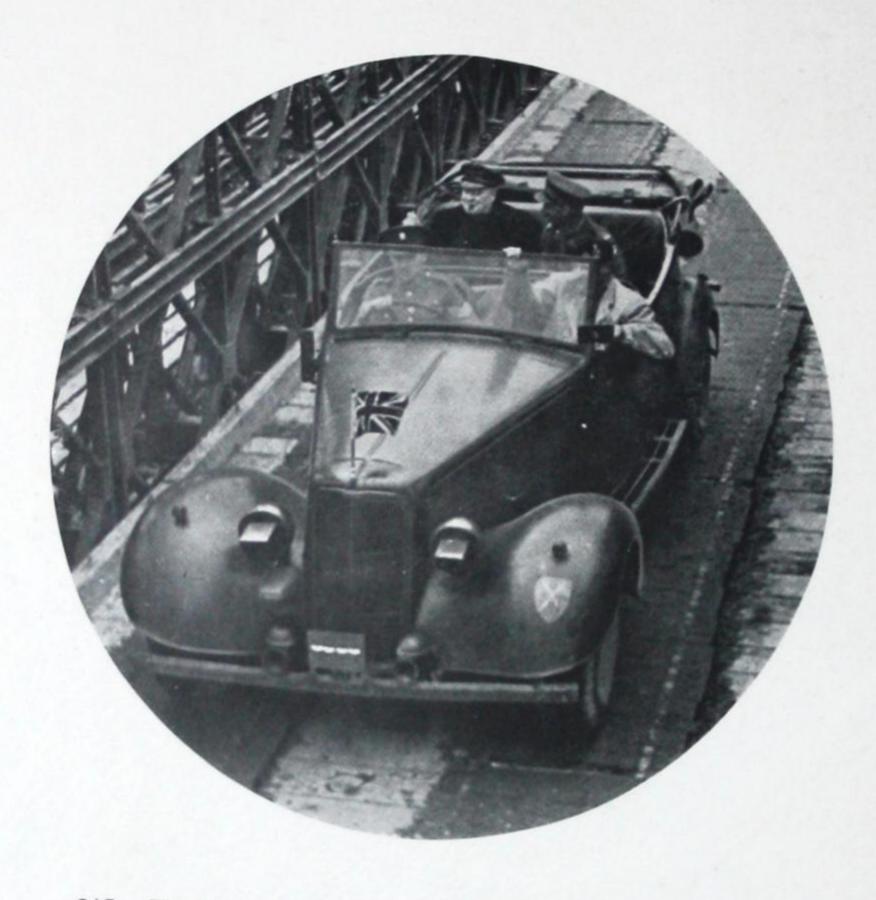




213. All welded armoured car hulls in manipulators during construction at West Bromwich.



214. THE FIRST ARMOURED CAR TO ENTER BENGHAZI



215. The Prime Minister the Rt. Hon. Winston S. Churchill, Field Marshal Lord Alexander and Field Marshal Lord Montgomery crossing a Braithwaite Bailey Bridge in Italy during the Second World War.

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TSITSA BRIDGE CD189763 100F#SPAN

BRAITHWAITE & KIRK MAKERS WESTBROMMUCH

TOUW RIVERBRIDGE - 1897 -100 F. SPAN

G.I.P.RY CHOTA TOWA BRIDGE CONTRACT Nº 260

65-8 Spall RAILWAY

Brathwaite & hirk

I.S.R GOONA BARARY SOUTH BEHAR & KIRK

CROWN AGENTS FOR THE COLON 2 PS TANKS 24.12 12 DEEP WITH REON W/ TANG RLY 3616/1 NDENT NORLY 208 DATED 4 10 4 BRAITHWAITE & CO ENGINEERS NEWPORT MON ORDER Nº GT8240

STE

I.S.R GOONA BARARY & KIRK

CROWN AGENTS COLONIES PSTANK 24×24×12 DIVISION ON STEEL TOWER 57-9 HIGH REON. W/TANG. RLY. 3245/1 CONTRACTORS

INDENT Nº RLY. I - DATED 5-1-44 BRAITHWAITE & COENGLIO-NEWPORT ORDER Nº T-7731 - NOV. 1934 DIA

Brudge. HOO SPAN. & KIRK. Westbromwich. STANDARD DERRICK 36'-0"HIGH FOR THE WAR OFFICE ENGINEER W.T.EVERALL M.INST.C-E CONTRACTORS BRAITHWAITE & Cº. ENGINEERS LTº WEST BROMWICH CONTRACT Nº 4229 OF 1939.

GOFT SPAN.

Contract Nº 18.

BRAITHWAITE

& KIRK

GENTRAL SOUTH AFRICAN (G RY D) 50 metre Spans Reqne \ Braithwaite W.901/1 8- Kurk 1906 West-Bromwich

BRAITHW STEELM

CROWN AGENTS FOR THE COLONIES 1PS TANK 16.12.8 DEEP WITH REON W/CEYLON RLY 6500/1 OPEN TOP INDENT Nº 1026 DATED 2 2 46 BRAITHWAITE & CO ENGINEERS LTD SEPT 1941 NEWPORT MON ORDER Nº GT8372

ICA GOVERNMENT RAILWAY MAY-PEN BRIDGE CONTRACT 778/1 (JUNE 16 1923) R JOHN WOLFE BARRY, LYSTER & PARTNERS MAKERS THWAITE&Coencineers L TORIA SI LONDON SWL

CAITHWAITE & CO ENGAS L'ID WEST BROMWICH HP.CYLINDER SCREWING CAPSTAN - Nº3 -

FOOTBRIDGES -AHMEDABAD B.B&C.I.RLY 1/50 & 1/70 SPAN WEST BROMWICH.

CROWN AGENTS FOR THE COLONIES IPS TANK 24 x 20 x 4 DEEP WITH CENTRAL DIVISION REQN W/CEYLON RLY 6601/1 INDENT Nº 1091/46 DATED 1-5-46 CONTRACTORS -BRAITHWAITE & Cº ENGINEERS LTD ORDER Nº T8594 JULY 1947

NATAL GOVI RYS Indent 112 (Braithwaite R&H.980.A7 & Kirk West Bromwich 1906

AITE DRK

75-6 SPAN, Cont BRHITHWAITE & KIRK, 1901. Westbromwich.

INDIAN STATE RES 100 O DECK SPANS CONI NO D 253 (1904) BRAITHWAITE & KIRK WESTBROMWICH

EAST INDIAN RY 150-0 SPANS Cout 119) Brathworte

1905 hest brommich

SANTAMARTARY 146.0 & 40.0 SPANS Specificulion NoF911 Bruilmaile Shirk West-Bromwich 1906

6 GAUGE 60-0 CLEAR SPAN

STEELWORK BY BRAITHWAITE & CO. ENGINEERS LID. 25-OSPANS MADE FOR Mess'SJ. REID& CO By Brailhurailes Kith 1906 West-Bronuvich

ITE

K

UGANDARAILWAY CYLINDERS & BEARING GIRDERS FOR BRIDGE PIERS REO Nº 604-1899 CONT NO I SIR A. M. RENDEL Engineer

STEELWORK BRAITHWAITE ENCINEERS LTD WEST BROWWICH

> STEELWORK BRAITHWAITE & C'ENGINEERS L' WEST BROMWICH

EAPEGOVERNMENT:RYPW.D. 1910 \West Brommich

CROWN AGENTS FOR THE COLONIES P.S. TANK 16 x 16 x 8 DEEP, OPEN TOP PREPARED FOR INCREASE TO 12' DEEP ON 30' HIGH STEEL TOWER REQ NOW/KUR 3233/IA INDENT NO 939 DATED 20 6 46 CONTRACTORS -BRAITHWAITE & CO STRUCTURAL LTD NEWPORT, MON JUNE 1949 ORDER NO T502

> NATAL GOVERNMENT RES 400 SPAN Indent Nº LaW 208

BRAITHWAITE & KIRK MAKERS

BRATTHWATTE & Ca Emera L.To.

NOV. 107 1934. ROWN AGENTS FOR THE COLONES S TANK 40 x 36 x 12 DEEP WITH WEATHERPROOF COVER REQ NO W/EC3 UGANDA PWD 2786/1 NOENT NO 64/1949 DATED 13 149 BRAITHWAITE & CO STRUCTURAL LTD. NEWPORT MON DATE MAY 1950

₹CROWN AGENTS#COLON

REO" Nº W/RAQ. 4163/L

BRIDGES IRAQ

BRAITHWAITE & C' ENG" L'

WEST BROMWICH

WESTBROMMIC THE MANILA RECOLD PENERANDA BRIDGE 50 metre\ Braithwaite Hest-Bromwich 906

